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THE FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND

COMMUNICATION

FROM

THE BOARD OF TRUSTEES, THE FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND

TRANSMITTING

THE 1989 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND, PURSUANT TO 42 U.S.C. 401(c)(2), 1395i(b)(2), 1395t(b)(2)

APRIL 26, 1989.—Referred jointly to the Committee on Ways and Means and Energy and Commerce, and ordered to be printed

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U.S. GOVERNMENT PRINTING OFFICE

97-262 WASHINGTON : 1989

LETTER OF TRANSMITTAL

Board of Trustees of the
Federal Supplementary Medical Insurance Trust Fund
Washington, D.C., April 24, 1989

HONORABLE JAMES C. WRIGHT, JR.
Speaker of the House of Representatives
Washington, D.C.

HONORABLE DAN QUAYLE
President of the Senate
Washington, D.C.

GENTLEMEN:

We have the honor of transmitting to you the 1989 Annual Report of the Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund (the 24th such report), in compliance with the provisions of section 1841(b) of the Social Security Act.

Respectfully,

NICHOLAS F. BRADY,
Secretary of the Treasury, and
Managing Trustee of the Trust Fund

ELIZABETH DOLE,
Secretary of Labor,
and Trustee

LOUIS W. SULLIVAN, M.D.,
Secretary of Health and
Human Services, and Trustee

MARY FALVEY FULLER,
Trustee

SUZANNE DENBO JAFFE,
Trustee

LOUIS B. HAYS,
Acting Administrator of the Health Care
Financing Administration, and Secretary,
Board of Trustees

1989 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND

COMMUNICATION

From

THE BOARD OF TRUSTEES, FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND

Transmitting

THE 1989 ANNUAL REPORT OF THE BOARD, PURSUANT TO SECTION 1841(b) OF THE SOCIAL SECURITY ACT AS AMENDED

Catastrophic p 9

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1989 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND

THE BOARD OF TRUSTEES

The Federal Supplementary Medical Insurance Trust Fund, established on July 30, 1965, is held by the Board of Trustees under the authority of section 1841(b) of the Social Security Act, as amended. The Board has five members. Three serve in an ex officio capacity. These members are the Secretary of the Treasury, the Secretary of Labor, and the Secretary of Health and Human Services. Two public members, Mary Falvey Fuller and Suzanne Denbo Jaffe, are provided for by the Social Security Amendments of 1983 (Public Law 98-21, enacted into law on April 20, 1983). The two public members were nominated by the President for a term of four years and were confirmed by the Senate. Although the original four-year terms of the public members ended in 1988, both of them received recess appointments which extended their terms.

By law, the Secretary of the Treasury is designated as the Managing Trustee, and the Administrator of the Health Care Financing Administration is designated as Secretary of the Board. The Board of Trustees reports to the Congress each year on the operation and status of the trust fund, in compliance with section 1841(b)(2) of the Social Security Act. This is the 1989 annual report, the twenty-fourth such report.

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EXECUTIVE SUMMARY

The supplementary medical insurance (SMI) program pays for physician services, outpatient hospital services, and other medical expenses for both aged 65 and over and for the long-term disabled. Effective January 1, 1990, the SMI program will cover the catastrophic benefits for the catastrophic limit, mammography screening, respite care, and drug therapy. In calendar year (CY) 1988, 31.7 million persons were covered under SMI. General revenue contributions during 1988 amounted to $26.2 billion, accounting for 73.1 percent of all SMI income. About 24.5 percent of all income resulted from the premiums paid by the enrollees, with interest payments to the SMI fund accounting for the remaining 2.4 percent. Of the $35.2 billion in SMI disbursements, $34.0 billion was for benefit payments while the remaining was spent for administrative expenses. SMI administrative expenses were 3.6 percent of total disbursements.

The SMI program essentially is yearly renewable term insurance financed from premium income paid by the enrollees and from income contributed from general revenue. This means that the SMI trust fund should always be somewhat greater than the claims that have been incurred by enrollees but not yet paid by the program. The trust fund holds all of the income not currently needed to pay benefits and related expenses. The assets of the fund may not be used for any other purpose; however, they may be invested in certain interest-bearing obligations of the U.S. Government.

Financing for the non-catastrophic portion of the SMI program, which will be referred to as basic coverage, is established annually on the basis of standard monthly premium rates (paid by or on behalf of all participants) and monthly

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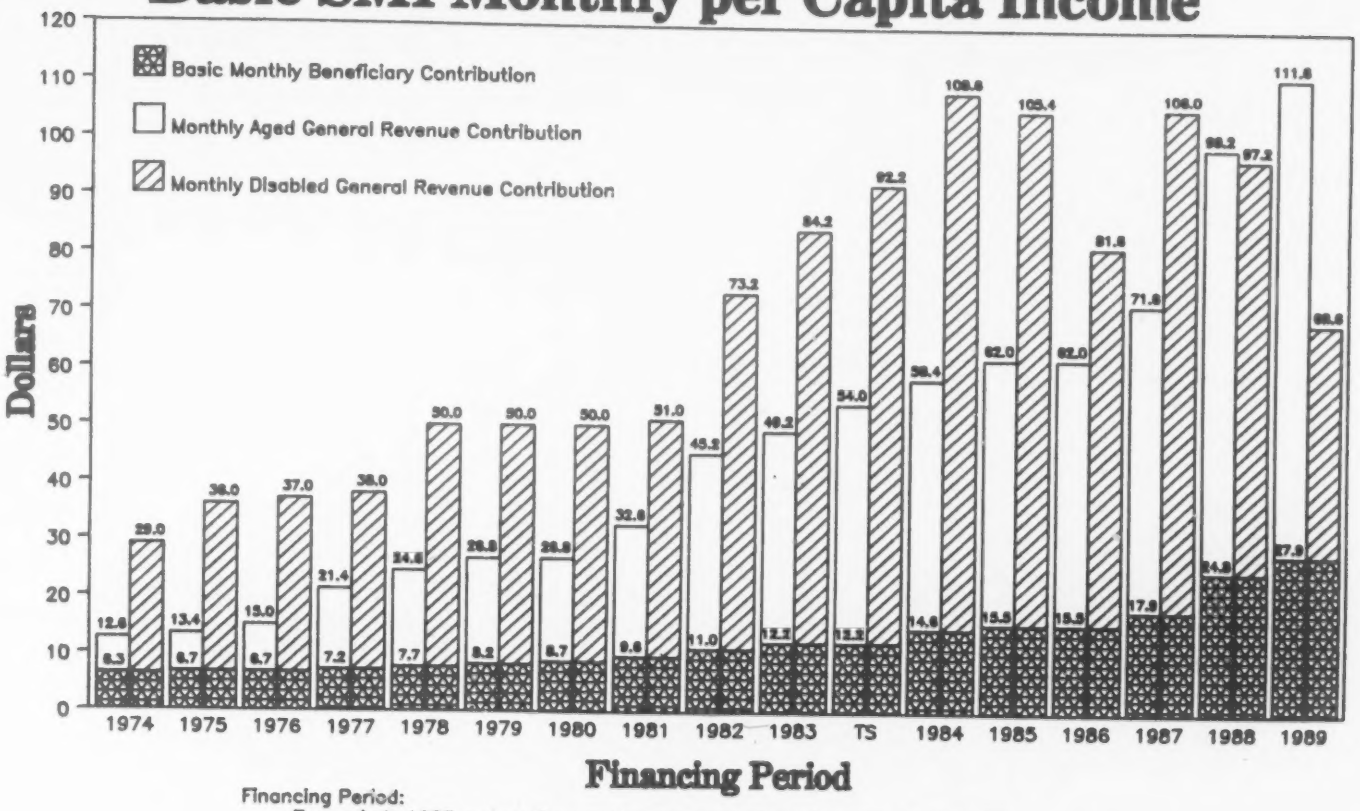
actuarial rates determined separately for aged and disabled beneficiaries (on which general revenue contributions are based). Prior to the 6-month transition period (July 1, 1983 through December 31, 1983), these rates were applicable in the 12-month periods ending June 30. Beginning January 1, 1984, the annual basis was changed to calendar years. Monthly actuarial rates are equal to one-half the monthly amounts necessary to finance the SMI program. These rates determine the amount to be contributed from general revenues on behalf of each enrollee. Based on the formula in the law, the Government contribution effectively makes up the difference between twice the monthly actuarial rates and the standard monthly premium rate. Figure 1 presents these values for financing periods since 1974. This figure clearly indicates the extent to which general revenue financing is the major source of income for the program.

Financing for the catastrophic portion of the SMI program is established annually on the basis of the catastrophic coverage monthly premium rates (paid by or on behalf of all participants) and the supplemental catastrophic coverage premium rates. The catastrophic coverage monthly premiums for most SMI enrollees and the supplemental catastrophic coverage premium rates are established through 1993. The supplemental catastrophic coverage premium rate applies to all individuals who are Medicare-eligible for more than 6 full months in a taxable year and have adjusted income tax liability for the taxable year which is at least $150. The income from the supplemental catastrophic coverage premiums will cover the hospital insurance (HI) program catastrophic expenses first with the excess covering the SMI catastrophic expenses. The catastrophic coverage monthly premiums for most SMI enrollees and the supplemental catastrophic coverage premium rate applicable to years after 1993 are determined by formulas prescribed by law.

Figure 1

Basic SMI Monthly per Capita Income



Financing Period:

For periods 1983 and earlier, the financing period is July 1 through June 30.
Transitional semester (TS), the financing period is July 1, 1983 through December 31, 1983.
For 1984 through 1989 the financing period is January 1 through December 31.

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Operations of the SMI Program

Historical and projected operations of the fund through 1991 are shown in Tables 5 and 6 in this report. As can be seen, income has exceeded disbursements for most of the historical years. The financing for basic coverage for CY 1989 was established to increase aged assets and to decrease disabled assets. However, since that time, the experience of the basic program appears to be more favorable than expected. In addition, beginning in CY 1989, the SMI transactions of the Medicare Catastrophic Coverage Account will be added to the SMI trust fund. For CY 1989, these transactions are primarily income transactions since SMI catastrophic benefits are not effective until January 1, 1990. As a result, in CY 1989, income is projected to exceed disbursements, and the trust fund balance is projected to increase through CY 1989.

The financial status of the program depends on both the total net assets and liabilities. It is, therefore, necessary to examine the incurred experience of the program, since it is this experience which is used to determine the actuarial rates discussed above and which forms the basis of the concept of actuarial soundness as it relates to the SMI program.

Actuarial Soundness of the SMI Program

The concept of actuarial soundness, as it applies to the SMI program, is closely related to the concept as it applies to private group insurance. The SMI program is essentially yearly renewable term insurance financed from premium income paid by the enrollees, from income contributed from general revenue, and from interest payments on the trust fund assets.

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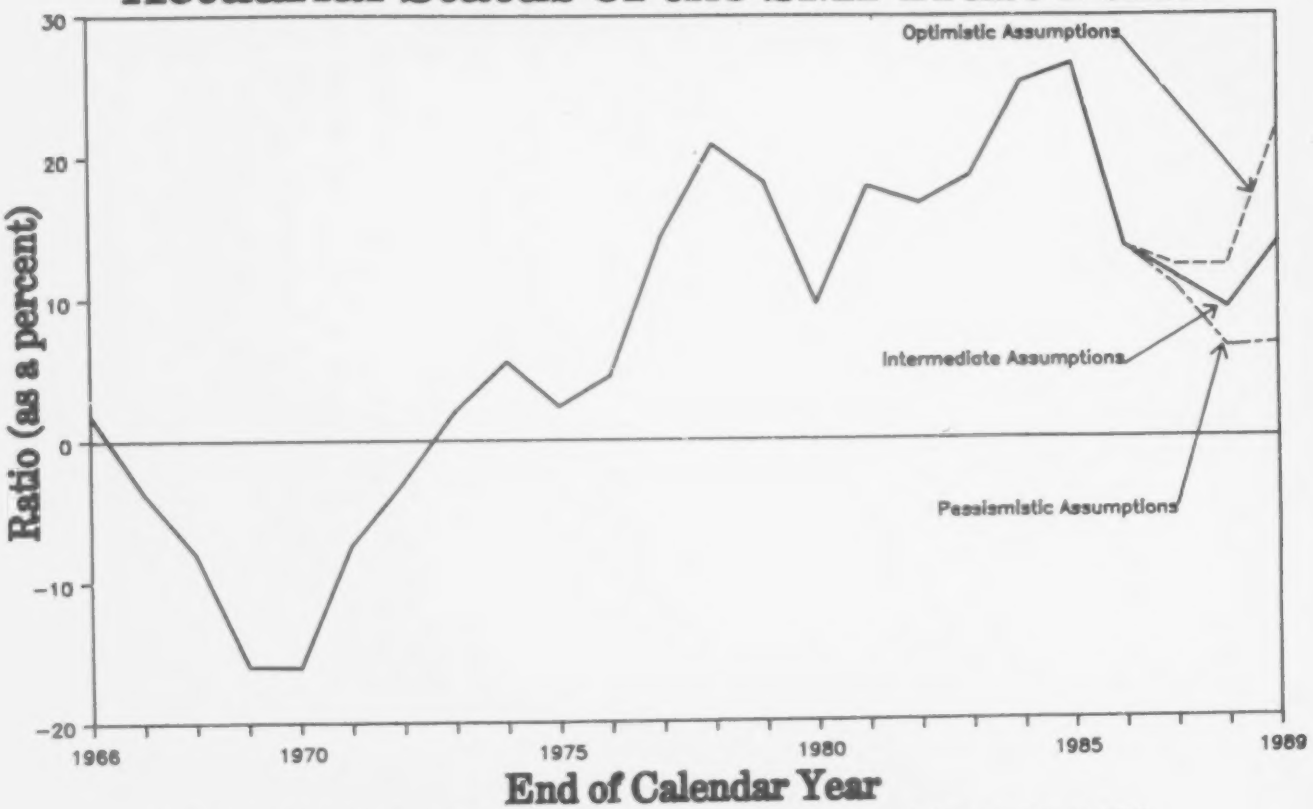
In testing the actuarial soundness of the SMI program, it is not appropriate to look beyond the period for which the enrollee premium rates and level of general revenue financing have been established. The primary tests of actuarial soundness, then, are that: (1) assets and income for years for which financing has been established be sufficient to meet the projected benefits and associated administrative expenses incurred for that period and (2) assets be sufficient to cover projected liabilities that will have been incurred by the end of that time but will not have been paid yet. Even if these tests of actuarial soundness are not met, the program can continue to operate if the trust fund remains at a level adequate to permit the payment of claims as presented. However, to protect against the possibility that cost increases under the program will be higher than assumed, assets should be sufficient to cover the impact of a moderate degree of variation between actual and projected costs.

The primary tests for actuarial soundness and trust fund adequacy can be viewed by direct examination of absolute dollar levels. In providing an appropriate contingency or margin for variation, however, there must also be some relative measure. The relative measure or ratio used for this purpose is the ratio of the assets less liabilities to the following year's incurred expenditures. Figure 2 shows this ratio for historical years and for projected years under the intermediate assumptions (Alternative II-B), as well as high (pessimistic) and low (optimistic) cost sensitivity scenarios.

Financing for basic coverage for CY 1989 was established to increase aged assets and to decrease disabled assets while maintaining the overall relative level of the excess of assets over liabilities. However, since that time, the experience of the basic program appears to be more favorable than expected. In addition,

Figure 2

Actuarial Status of the SMI Trust Fund



Note: The actuarial status of the SMI trust fund is measured by the ratio of the end of year surplus or deficit to the following year incurred expenditures

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beginning in CY 1989, the SMI transactions of the Medicare Catastrophic Coverage Account will be added to the SMI trust fund. For CY 1989, these transactions are primarily income transactions since SMI catastrophic enefits are not effective until January 1, 1990. As a result, the excess of assets over liabilities is expected to increase by December 31, 1989.

Conclusion of the Board of Trustees

The financing for basic coverage established through December 1989 is sufficient to cover projected benefits and administrative costs for basic coverage through that time period. This financing, along with the financing for SMI catastrophic transactions through December 1989, is sufficient to maintain a level of trust fund assets which is adequate to cover the impact of a moderate degree of variation between actual costs and projected costs. The SMI program can thus be said to be actuarially sound.

Although the SMI program is financially sound, the Board notes with concern the rapid growth in the cost of the program. Growth rates have been so rapid that outlays of the program have nearly doubled in the last five years. For the same time period, the program grew 32 percent faster than the economy as a whole. This growth rate shows no sign of abating despite recent efforts to control the cost of the program. The Board recommends that Congress continue to work to curtail the rapid growth in the SMI program.

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SOCIAL SECURITY AMENDMENTS SINCE THE 1988 REPORT

Since the 1988 Annual Report was transmitted to Congress, the "Medicare Catastrophic Coverage Act of 1988" (Public Law 100-360) was enacted on July 1, 1988. The more important changes resulting from this legislation are described below.

(1) An annual limit on beneficiary out-of-pocket costs for SMI services is established beginning with 1990. This limit is $1,370 for the first year, and for subsequent years, it will be set at a level such that a projected 7 percent of SMI beneficiaries, excluding those enrolled in health care prepayment plans (HCPP), health maintenance organizations (HMO), and competitive medical plans (CMP) reach the limit. Payments to reasonable cost HMO and HCPP will be adjusted to reflect the increase in Medicare payment.

Out-of-pocket costs to reach the limit are defined as including the SMI deductible and coinsurance. Once the limit is reached, SMI will pay the costs of the blood deductible, 100 percent of reasonable charges or costs or other reimbursement methods with the exception of in-home care for which payments will remain at 80 percent.

(2) Coverage is provided for home IV drug therapy services, including nursing, pharmacy and related items and services effective January 1, 1990. However, prescription drugs used for home IV therapy are covered under the Catastrophic Drug Insurance Trust Fund. The coverage of services will not be subject to the SMI deductible or coinsurance, and the payment will be based on the lesser of the provider's actual charge or a fee schedule. The latter will be established before 1990.

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(3) Screening mammography is covered beginning January 1, 1990 for women enrolled in SMI over the age of 35. The amount of the payment will be subject to the SMI deductible and will be equal to 80 percent of the least of: (1) the actual charge for the screening, (2) the fee schedule established by the Secretary, or (3) the limit which will be $50 in 1990. In subsequent years, the limit will be indexed by the percentage increase in the Medicare Economic Index (MEI).

Payment will be made for only one mammography for those women between ages 35 and 39. Women between ages 40 and 49 may receive payment for annual or biennial screenings dependent on whether they are at a high risk of developing breast cancer. Women between the ages of 50 and 64 may receive payment for annual screenings, and women over 64 years of age may receive payment for biennial screenings.

(4) Beginning January, 1990, coverage is provided for in-home care for chronically dependent individuals who have been dependent for at least 3 months. This care will be referred to as respite care. The services will be provided beginning on the date that it is determined that the individual has incurred out-of-pocket costs equal to the Part B catastrophic limit or has met the outpatient prescription drug deductible. Payment for respite care services will be made per hour of care provided, on a reasonable cost (or similar cost related) basis. It will be made for a total of up to 80 hours in any 12-month period, but not to exceed 80 hours in a calendar year.

(5) Home health services benefits have been extended, effective January 1, 1990, by changing the definition of intermittent services from no more

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than four days per week to less than seven days per week and by specifying that daily care may now be provided up to 38 consecutive days.

(6) The SMI premium is increased to finance the catastrophic coverage benefits. The catastrophic coverage monthly premium amount for most enrollees is effective January 1989, and the amount is established by law through 1993. After that time, the premium will be the preceding year's premium adjusted by a percentage representing the sum of: the outlay-premium percentage and the reserve account percentage. The outlay-premium percentage is the percent by which the per capita catastrophic outlays in the second preceding year exceed or are less than the outlays in the third preceding year with an adjustment made for excessive changes in the growth of the consumer price index (CPI). The reserve account percentage allows for adjustments to the catastrophic coverage monthly premium when the balance in the Medicare Catastrophic Coverage Account (see (8) below) deviates from 20 percent of the outlays in the second preceding year.

(7) Medicare beneficiaries, who are eligible for Medicare Part A for more than 6 months in a calendar year and whose tax liability is $150 or more, are subject to a supplemental catastrophic coverage premium. Receipts attributable to the supplemental catastrophic coverage premium rate which are not otherwise appropriated to the Federal Hospital Insurance Catastrophic Coverage Reserve Fund are

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appropriated to the SMI trust fund. The calculation of the premium amount is discussed in the Annual Report of the Board of Trustees for HI.

(8) The Medicare Catastrophic Coverage Account is established under this legislation. It will be credited with the receipts of the SMI trust fund attributable to catastrophic coverage, receipts of the Federal Hospital Insurance Catastrophic Coverage Reserve Fund and interest on any positive average balance in the account. It will be debited with outlays attributable to the catastrophic coverage from the HI and SMI trust funds, as well as interest on any negative average balance in the account.

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NATURE OF THE TRUST FUND

The Federal Supplementary Medical Insurance Trust Fund was established on July 30, 1965, as a separate account in the United States Treasury. All the financial operations of the SMI program are handled through this fund.

The major sources of receipts of the trust fund are: (1) contributions of the Federal Government that are authorized to be appropriated and transferred from the general fund of the Treasury and (2) premiums paid by eligible persons who are voluntarily enrolled in the program. The premiums paid by eligible persons include both those specified by the Medicare Catastrophic Coverage Act of 1988 (Public Law 100-360) and those needed to finance the non-catastrophic benefits, which will be referred to as basic benefits. Eligible persons aged 65 and over have been able to enroll in the program since its inception in July 1966. Since July 1973, disabled persons under age 65, who have met certain eligibility requirements, have also been able to enroll in the program.

The premiums paid by enrollees for basic benefits are based on the standard monthly premium rate, which is the same for enrollees aged 65 and over and for disabled enrollees under age 65. Premiums paid for Fiscal Years (FY) 1967 through 1973 were matched by an equal amount of Government contributions. Beginning July 1973, the amount of Government contributions corresponding to premiums paid by each of the two groups of enrollees is determined by applying a ratio (known as the matching rate), prescribed in the law for each group, to the amount of premiums received for basic benefits from that group of enrollees. The ratio is equal to: (1) twice the amount of the monthly actuarial rate applicable to the particular group of enrollees, minus the amount of the standard monthly premium rate, divided by (2) the amount of the standard monthly premium rate.

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Standard monthly premium rates and actuarial rates are promulgated each year by the Secretary of Health and Human Services. The standard monthly premium rates in effect from July 1966 through June 1983, the rate for July 1983 through December 1983, and the rates for CY 1984 through 1989 are shown in Table 1. Actuarial rates and the corresponding matching rates in effect from July 1973 through June 1983, the rates applicable for July 1983 through December 1983, and the rates for CY 1984 through 1989 are also shown. For a detailed discussion of the determination of the actuarial and premium rates for basic benefits, see Appendix B.

The catastrophic coverage monthly premiums for most SMI enrollees and the supplemental catastrophic coverage premium rates are established through 1993. However, there is a different catastrophic coverage monthly premium for each of the following groups of enrollees: residents of Puerto Rico, residents of other U.S. commonwealths or territories, and enrollees who are not entitled to hospital insurance (HI) benefits and who are not residents of a U.S. commonwealth or territory. The catastrophic coverage monthly premiums for each of the latter groups of enrollees are established through 1990. The supplemental catastrophic coverage premium rate applies to all individuals who are Medicare-eligible for more than 6 full months in a taxable year and have adjusted income tax liability for the taxable year which equals or exceeds $150. The income from the supplemental catastrophic coverage premiums will cover the HI catastrophic expenses first with the excess covering the SMI catastrophic expenses. The catastrophic coverage monthly premiums for most SMI enrollees and the supplemental catastrophic coverage premium rate applicable to years after 1993 are determined by formulas prescribed in Title XVIII of the Social Security Act and subchapter A of chapter 1 of the Internal Revenue Code of 1986, respectively. The catastrophic coverage monthly premiums for residents of Puerto Rico or for residents of other U.S.

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Table 1.--MONTHLY PREMIUM RATES, SUPPLEMENTAL PREMIUM RATES, ACTUARIAL RATES, AND MATCHING RATES

	Monthly premium rates		Supplemental premium rate 2/	Basic monthly actuarial rate		Basic matching rate	
	Basic	Catastrophic coverage 1/		Enrollees aged 65 and over	Disabled enrollees under age 65	Enrollees aged 65 and over	Disabled Enrollees under age 65
July 1966 - March 1968	$ 3.00	---	---	---	---	---	---
April 1968 - June 1970	4.00	---	---	---	---	---	---
12-month period ending June 30 of --							
1971	5.30	---	---	---	---	---	---
1972	5.60	---	---	---	---	---	---
1973	5.80	---	---	---	---	---	---
1974 3/	6.30	---	---	$ 6.30	$14.50	1.0000	3.6032
1975	6.70	---	---	6.70	18.00	1.0000	4.3731
1976	6.70	---	---	7.50	18.50	1.2388	4.5224
1977	7.20	---	---	10.70	19.00	1.9722	4.2778
1978	7.70	---	---	12.30	25.00	2.1948	5.4935
1979	8.20	---	---	13.40	25.00	2.2683	5.0976
1980	8.70	---	---	13.40	25.00	2.0805	4.7471
1981	9.60	---	---	16.30	25.50	2.3958	4.3125
1982	11.00	---	---	22.60	36.60	3.1091	5.6545
1983	12.20	---	---	24.60	42.10	3.0328	5.9016
July 1983 - December 1983	12.20	---	---	27.00	46.10	3.4262	6.5574
Calendar year							
1984	14.60	---	---	29.20	54.30	3.0000	6.4384
1985	15.50	---	---	31.00	52.70	3.0000	5.8000
1986	15.50	---	---	31.00	40.80	3.0000	4.2645
1987	17.90	---	---	35.80	53.00	3.0000	4.9218
1988	24.80	---	---	49.60	48.60	3.0000	2.9194
1989	27.90	$4.00	$22.50	55.80	34.30	3.0000	1.4588

1/ This is the premium paid by most enrollees. However there is a different catastrophic coverage monthly premium for each of the following groups of enrollees: residents of Puerto Rico, residents of other U.S. territories, and enrollees who are not entitled to HI benefits and who are not residents of a U.S. territory.

2/ The supplemental catastrophic coverage premium rate is for each $150 of adjusted income tax liability. The income from this premium will cover the HI catastrophic expenses first, with the excess covering the SMI catastrophic expenses.

3/ In accordance with limitations on the costs of health care imposed under Phase III of the Economic Stabilization program, the standard premium rate for July and August 1973 was set at $5.80 and $6.10, respectively. Effective September 1973, the rate increased to $6.30.

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commonwealths or territories applicable to years after 1990 are also determined by formulas prescribed by Title XVIII. The catastrophic coverage monthly premium for the SMI only enrollees applicable to years after 1990 will be promulgated by the Secretary of Health and Human Services. The catastrophic coverage monthly premium for most SMI enrollees and the supplemental catastrophic coverage premium rate are shown in Table 1 through the year in which the total financing of the SMI program has been established.

Another source from which receipts of the trust fund are derived is interest received on investments held by the fund. The investment procedures of the fund are described later in this section.

Section 201(i) of the Social Security Act authorizes the Managing Trustee to accept and deposit in the trust fund unconditional money gifts or bequests made for the benefit of the fund or for any activity financed through the fund.

Expenditures for benefit payments and administrative expenses under the program are paid out of the trust fund. All expenses incurred by the Department of Health and Human Services and by the Department of the Treasury in carrying out the SMI provisions of Title XVIII of the Social Security Act are charged to the trust fund. The Secretary of Health and Human Services certifies benefit payments to the Managing Trustee, who makes the payments from the trust fund in accordance therewith.

The Social Security Amendments of 1967 and 1972 authorize the Secretary of Health and Human Services to develop and conduct a broad range of experiments and demonstration projects designed to determine various methods of increasing

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efficiency and economy in providing health care services, while maintaining the quality of such services, under the HI and SMI programs. A sizeable portion of such costs of such experiments and demonstration projects are paid out of the HI and SMI trust funds, with the remainder funded through general revenues.

Congress has authorized expenditures from the trust funds for construction, rental and lease, or purchase contracts of office buildings and related facilities for use in connection with the SMI program. Both the capital costs of construction financed directly from the trust fund and the rental and lease, or purchase contract costs of acquiring facilities are included in trust fund expenditures. In 1972-75, construction of several large facilities was authorized under purchase contract authority, wherein initial capital costs were borne by the private sector. Under this method of facilities acquisition, trust fund expenditures for use and ultimate Government ownership of a facility are made over periods of from 10 to 30 years. Whatever the manner of acquisition, the net worth of facilities and other fixed capital assets is not carried in the statement of the assets of the trust fund presented in this report. This is because the value of fixed capital assets does not represent funds available for benefit or administrative expenditures and, therefore, is not viewed as being a consideration in assessing the actuarial status of the funds.

That portion of the trust fund which, in the judgment of the Managing Trustee, is not required to meet current expenditures for benefits and administration is invested in interest-bearing obligations of the U.S. Government (including special public-debt obligations described below), in obligations guaranteed as to both principal and interest by the United States, or in certain federally sponsored agency obligations that are designated in the laws authorizing their issuance as lawful investments for fiduciary and trust funds under the control and authority of

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the United States or any officer of the United States. Obligations of these types may be acquired on original issue at the issue price or by purchase of outstanding obligations at their market price.

The Social Security Act authorizes the issuance of special public-debt obligations for purchase exclusively by the trust fund. The law requires that such special public-debt obligations shall bear interest at a rate based on the average market yield (computed on the basis of market quotations as of the end of the calendar month next preceding the date of such issue) on all marketable interest-bearing obligations of the United States forming a part of the public debt which are not due or callable until after the expiration of 4 years from the end of such calendar month.

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SUMMARY OF THE OPERATIONS OF THE TRUST FUND, FISCAL YEAR 1988

A statement of the income and disbursements of the Federal Supplementary Medical Insurance Trust Fund in FY 1988 and of the assets of the fund at the beginning and end of the fiscal year is presented in Table 2.

The total assets of the trust fund amounted to $6,392 million on September 30, 1987. During FY 1988, total receipts amounted to $35,002 million, and total disbursements were $34,947 million. Total assets thus increased $55 million during the year to a total of $6,447 million on September 30, 1988.

Of the total receipts, $7,963 million represented premium payments by (or on behalf of) enrollees aged 65 and over, and $793 million represented premium payments by (or on behalf of) disabled enrollees under age 65. Total premium payments amounted to $8,756 million, an increase of 35.1 percent over the amount of $6,480 million for the preceding year. This increase in premiums from enrollees resulted primarily from: (1) the increase from $17.90 to $24.80 per month in the standard premium rate that became effective on January 1, 1988 and (2) the growth of the number of persons enrolled in the SMI program.

Contributions received from the general fund of the treasury amounted to $25,418 million, which accounted for 73 percent of total receipts. This amount consisted of $22,830 million representing contributions relating to premiums paid by enrollees aged 65 and over, and $2,588 million representing contributions relating to the premiums paid by disabled enrollees under age 65. The remaining $828 thousand of receipts consisted almost entirely of interest on the investments of the trust fund.

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Table 2.--STATEMENT OF OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND DURING FISCAL YEAR 1988
(In thousands)

Total assets of the trust fund, beginning of period		$ 6,392,394
Receipts:		
Premiums from enrollees:		
Enrollees aged 65 and over	$ 7,963,135	
Disabled enrollees under age 65	792,613	
Total premiums		8,755,748
Transfers from general fund of the Treasury:		
Government contributions:		
Supplementary premiums of enrollees aged 65 and over	22,829,939	
Supplementary premiums of disabled enrollees under age 65	2,588,061	
Total Government contributions		25,418,000
Other		3
Interest:		
Interest on investments	822,973	
Interest on amounts of interfund transfers *	5,128	
Total interest		828,101
Total receipts		35,001,852
Disbursements:		
Benefit payments		33,681,771
Administrative expenses:		
Treasury administrative expenses	1,253	
Salaries and expenses - SSA	214,204	
Salaries and expenses - HCFA	1,021,647	
Salaries and expenses Office of Secretary	11,102	
Construction	12,416	
Professional Standard Review Organization	0	
Public Health Service	821	
Reimbursement of SSA expenses	0	
Reimbursement of HCFA expenses	0	
Pay Assessment Commission	539	
Office of Personnel Management expenses	85	
Physicians Payment Review	2,997	
Total administrative expenses		1,265,064
Total disbursements		34,946,835
Net addition to the trust fund		55,017
Total assets of the trust fund, end of period		6,447,411

* A positive figure represents a transfer of interest to the SMI trust fund from the other trust funds.
A negative figure represents a transfer of interest from the SMI trust fund to the other trust funds.

NOTE: Totals do not necessarily equal the sum of rounded components.

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Of the $34,947 million in total disbursements, $33,682 million represented: (1) benefits paid directly from the trust fund for health services covered under Title XVIII of the Social Security Act and (2) costs of experiments and demonstration projects in providing health care services.

The remaining $1,265 million of disbursements was for administrative expenses. Administrative expenses are allocated and charged directly to each of the four trust funds—old age and survivors insurance, disability insurance, HI, and SMI—on the basis of provisional estimates. Similarly, the expenses of administering other programs of the Health Care Financing Administration are also allocated and charged directly to the general fund of the Treasury on a provisional basis. Periodically, as actual experience develops and is analyzed, the allocations of administrative expenses and costs of construction for prior periods are adjusted by interfund transfers. This adjustment includes transfers between the HI and SMI trust funds and the program management general fund account, with appropriate interest allowances.

In Table 3, the experience with respect to actual amounts of enrollee premiums, Government contributions, and benefit payments in FY 1988 is compared with the estimates for FY 1988 which appeared in the 1987 and 1988 annual reports.

Table 4 shows a comparison of the total assets of the fund and their distribution at the end of FY 1987 and at the end of FY 1988. The assets of the trust fund at the end of FY 1987 totaled $6,392 million, consisting of $6,166 million in the form of obligations of the U.S. Government, and an undisbursed balance of $226 million. The assets of the trust fund at the end of FY 1988 totaled $6,447 million, consisting of $6,326 million in the form of obligations of the U.S. Government and

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Table 3.--COMPARISON OF ACTUAL AND ESTIMATED OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND, FISCAL YEAR 1988
(Dollar amounts in millions)

Item	Actual amount	Comparison of actual experience with estimates for FY 1988 published in --			
		1988 report		1987 report	
		Estimated amount	Actual as percentage of estimate	Estimated amount	Actual as percentage of estimate
Premiums from enrollees	$ 8,756	$ 8,719	100	$ 8,536	103
Government contributions	25,418	25,418	100	25,152	101
Benefit payments	33,682	33,992	99	34,089	99

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Table 4.--ASSETS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND AT THE END OF FISCAL YEARS 1987 AND 1988 *

	September 30, 1987	September 30, 1988
Investments in public-debt obligations sold only to this fund (special issues):		
Certificates of indebtedness:	--	$ 8,558,000.00
Bonds:		
8 1/4-percent, 1989-93	$ 110,095,000.00	--
8 3/8-percent, 2001	444,270,000.00	444,270,000.00
8 3/4-percent, 1989-94	399,662,000.00	--
9 1/4-percent, 1991-93	--	1,136,139,000.00
9 3/4-percent, 1995	115,003,000.00	115,003,000.00
10 3/8-percent, 1989-2000	1,895,771,000.00	1,661,292,000.00
10 3/4-percent, 1989-98	897,291,000.00	809,231,000.00
13 1/4-percent, 1989-97	1,076,184,000.00	1,033,983,000.00
13 3/4-percent, 1989-99	1,227,792,000.00	1,117,677,000.00
Total investments in public-debt obligations	6,166,068,000.00	6,326,153,000.00
Undisbursed balance	226,325,935.86	121,258,054.76
Total assets	6,392,393,935.86	6,447,411,054.76

* The assets are carried at par value, which is the same as book value.

an undisbursed balance of $121 million. A comparison of assets of the trust fund with liabilities for incurred but unpaid benefits (and related administrative expenses) is shown in a later section.

The net increase in the par value of the investments held by the fund during FY 1988 amounted to $160 million. New securities at a total par value of $37,816 million were acquired during the fiscal year through the investment of receipts and reinvestment of funds made available from the redemption of securities. The par value of securities redeemed during the year was $37,656 million. Included in these amounts is $35,321 million in certificates of indebtedness that were acquired, and $35,312 million in certificates of indebtedness that were redeemed, within the fiscal year.

The effective annual rate of interest earned by the assets of the SMI trust fund for the 12 months ending on June 30, 1988 was 10.4 percent. This period is used because interest on special issues is paid semiannually on June 30 and December 31. The interest rate on special issues purchased by the trust fund in June 1988 was 9 1/4 percent, payable semiannually.

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EXPECTED OPERATIONS AND STATUS OF THE TRUST FUND DURING THE PERIOD OCTOBER 1, 1988 AND DECEMBER 31, 1991

Financing for the SMI program is established annually on the basis of monthly premium rates (paid by or on behalf of the enrollees) for both basic and catastrophic benefits, supplemental catastrophic coverage premium rates, and actuarial rates for basic benefits (on which general revenue contributions are based). Beginning January 1, 1984, the annual basis has been the calendar year for basic coverage rates. Catastrophic coverage rates are on a calendar-year basis beginning January 1, 1989.

Although basic monthly premium rates and basic actuarial rates have been set only for periods through December 31, 1989 and some of the catastrophic coverage monthly premium rates have been set only for periods through December 31, 1990, projections are presented through December 31, 1991 to conform with the requirements of Section 1841(b) of the Social Security Act. It has been assumed in this report that financing after that time will be established in accordance with the provisions described in the "Nature of the Trust Fund" section.

The projections shown in the following tables are based on two sets of economic assumptions labeled Alternative A and Alternative B. These alternatives reflect two different levels of expectation of future performance of the economy. The economic and demographic assumptions underlying the alternative projections are described in detail in the 1989 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds. Appendix A presents an explanation of the effects of Alternative A and Alternative B on the projections in this report. For the projection period shown in this report, the variation in economic performance between Alternative A and Alternative B does not significantly affect the operations of the SMI program.

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Under both sets of projections, it is assumed that the January 1, 1989 increase in the allowable fee limits for physician services will be 2.1 percent. Alternative A has the January 1, 1990 update as 4.3 percent and the Alternative B as 4.5 percent. The costs per enrollee for institutional and other services under the SMI program are projected to increase an average of 14.2 percent for CY 1989 and 18.8 percent for CY 1990. These increases represent price increases and increases due to other factors.

Table 5 shows the projected operations of the trust fund on a fiscal-year basis through FY 1991. Table 6 shows the corresponding development on a calendar-year basis. The level of the trust fund increased in FY 1988 and CY 1988 for two reasons. First, the actuarial rates for this period were set to slightly increase the assets to a more appropriate level. Second, actual expenditures were lower than the estimate at the time of promulgation, primarily due to the passage of the "Omnibus Budget Reconciliation Act of 1987" (Public Law 100-203) on December 27, 1987.

The actuarial rates for basic coverage for CY 1989 were promulgated with specific margins to increase aged assets and to reduce disabled assets. The "Medicare Catastrophic Coverage Act of 1988" (Public Law 100-360) created the "Medicare Catastrophic Coverage Account" as of January 1, 1989. Transactions of this account occur in CY 1989 and are reflected in this report, even though the first SMI-related catastrophic benefits are not paid until January 1, 1990. Based on these actuarial rates, the start of the catastrophic coverage transactions and the above economic assumptions, the fund is projected to reach a level of $13.1 billion under both alternatives by the end of CY 1989 and then increase to $14.9 billion by the end of CY 1990.

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Table 5.--ESTIMATED PROGRESS OF SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS)
FISCAL YEARS 1989-1991 AND ACTUAL DATA FOR 1967-1988
(In millions)

Fiscal year 1/	Income							Disbursements					Balance in fund at end of year 4/
	Premiums from enrollees			Government contributions 2/	Interest and other income 3/		Total income	Benefit payments		Administrative expenses		Total disbursements	
		Catastrophic coverage				Catastrophic Coverage			Catastrophic Coverage		Catastrophic Coverage		
	Basic	Monthly	Supplemental		Basic			Basic		Basic			
Historical:													
1967	$ 647	---	---	$ 623	$ 15	---	$ 1,285	$ 664	---	$ 135 5/	---	$ 799	$ 486
1968	698	---	---	634	21	---	1,353	1,390	---	142	---	1,532	307
1969	903	---	---	984	24	---	1,911	1,645	---	195	---	1,840	378
1970	936	---	---	928	12	---	1,876	1,979	---	217	---	2,196	57
1971	1,253	---	---	1,245	18	---	2,516	2,035	---	248	---	2,283	290
1972	1,340	---	---	1,365	29	---	2,734	2,255	---	289	---	2,544	481
1973	1,427	---	---	1,430	45	---	2,902	2,391	---	246	---	2,637	746
1974	1,704	---	---	2,029	76	---	3,809	2,874	---	409	---	3,283	1,272
1975	1,887	---	---	2,330	105	---	4,322	3,765	---	405	---	4,170	1,424
1976	1,951	---	---	2,939	104	---	4,994	4,672	---	528	---	5,200	1,219
T.Q.	539	---	---	878	4	---	1,421	1,269	---	132	---	1,401	1,239
1977	2,193	---	---	5,053	137	---	7,383	5,867	---	475	---	6,342	2,279
1978	2,431	---	---	6,386	228	---	9,045	6,852	---	504	---	7,356	3,968
1979	2,635	---	---	6,841	363	---	9,839	8,259	---	555	---	8,814	4,994
1980	2,928	---	---	6,932	415	---	10,275	10,144	---	593	---	10,737	4,532
1981	3,320	---	---	8,747	372	---	12,439	12,345	---	883	---	13,228	3,743
1982	3,831	---	---	13,323	473	---	17,627	14,806	---	754	---	15,560	5,810
1983	4,227	---	---	14,238	682	---	19,147	17,487	---	824	---	18,311	6,646
1984	4,907	---	---	16,811	807	---	22,525	19,473	---	899	---	20,372	8,799
1985	5,524	---	---	17,898	1,155	---	24,577	21,808	---	922	---	22,730	10,646
1986	5,699	---	---	18,076	1,228	---	25,003	25,169	---	1,049	---	26,218	9,432
1987	6,480	---	---	20,299	1,018	---	27,797	29,937	---	900	---	30,837	6,392
1988	8,756	---	---	25,418	828	---	35,002	33,682	---	1,265	---	34,947	6,447
Projected:													
Alternative A:													
1989	10,485	$1,129	$ 0	30,712	806	$ 16	43,148	37,396	$ 0	1,104	$120	38,620	10,975
1990	11,319	1,848	2,545	33,350	880	171	50,113	43,375	1,210	1,165	178	45,928	15,160
1991	11,928	2,146	2,534	37,749	859	423	55,639	50,157	3,070	1,223	68	54,518	16,281
Alternative B:													
1989	10,485	1,129	0	30,712	806	16	43,148	37,402	0	1,106	120	38,628	10,967
1990	11,319	1,849	2,384	33,415	884	177	50,228	43,421	1,210	1,165	178	45,974	15,221
1991	12,048	2,147	2,597	37,781	867	445	55,885	50,322	3,090	1,227	68	54,707	16,399

1/ For 1967 through 1976, fiscal years cover the interval from July 1 through June 30; the 3-month interval from July 1, 1976, through September 30, 1976, is labeled "T.Q.," the transition quarter; 1977 through 1991 cover the interval from October 1 through September 30.
2/ The payments shown as being from the general fund of the Treasury include certain interest-adjustment items.
3/ Other income includes recoveries of amounts reimbursed from the trust fund which are not obligations of the trust fund and other miscellaneous income.
4/ The financial status of the program depends on both the total net assets and the liabilities of the program (See Table 9).
5/ Administrative expenses shown include those paid in FY 1966 and 1967.

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Table 6.--ESTIMATED PROGRESS OF SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS)
CALENDAR YEARS 1989-1991 AND ACTUAL DATA FOR 1966-1988
(in millions)

Calendar year	Income: Premiums from enrollees: Basic	Income: Premiums from enrollees: Catastrophic Coverage: Monthly	Income: Premiums from enrollees: Catastrophic Coverage: Supplemental	Income: Government contributions 1/	Income: Interest and other income 2/: Basic	Income: Interest and other income 2/: Catastrophic Coverage	Income: Total Income	Disbursements: Benefits Payments: Basic	Disbursements: Benefits Payments: Catastrophic Coverage	Disbursements: Administrative expenses: Basic	Disbursements: Administrative expenses: Catastrophic Coverage	Disbursements: Total disbursements	Balance in fund at end of year 3/
Historical:													
1966	$ 322	---	---	$ 0	$ 2	---	$ 324	$ 128	---	$ 75	---	$ 203	$ 122
1967	640	---	---	933	24	---	1,597	1,197	---	110	---	1,307	412
1968	832	---	---	858	21	---	1,711	1,518	---	184	---	1,702	421
1969	914	---	---	907	18	---	1,839	1,865	---	196	---	2,061	199
1970	1,096	---	---	1,093	12	---	2,201	1,975	---	237	---	2,212	188
1971	1,302	---	---	1,313	26	---	2,639	2,117	---	260	---	2,377	450
1972	1,382	---	---	1,389	37	---	2,808	2,325	---	289	---	2,614	643
1973	1,550	---	---	1,705	57	---	3,312	2,526	---	318	---	2,844	1,111
1974	1,804	---	---	2,225	95	---	4,124	3,318	---	410	---	3,728	1,506
1975	1,918	---	---	2,648	107	---	4,673	4,273	---	462	---	4,735	1,444
1976	2,060	---	---	3,810	107	---	5,977	5,080	---	542	---	5,622	1,799
1977	2,247	---	---	5,386	172	---	7,805	6,038	---	467	---	6,505	3,099
1978	2,478	---	---	6,287	299	---	9,056	7,252	---	503	---	7,755	4,400
1979	2,719	---	---	6,643	404	---	9,768	8,708	---	557	---	9,265	4,902
1980	3,011	---	---	7,435	408	---	10,874	10,635	---	610	---	11,245	4,530
1981	3,722 4/	---	---	11,291 4/	361	---	15,374	13,113	---	915	---	14,028	5,877
1982	3,697 4/	---	---	12,284 4/	599	---	16,580	15,455	---	772	---	16,227	6,230
1983	4,236	---	---	14,861	727	---	19,824	18,106	---	878	---	18,984	7,070
1984	5,167	---	---	17,054	959	---	23,180	19,661	---	891	---	20,552	9,698
1985	5,613	---	---	18,250	1,243	---	25,106	22,947	---	933	---	23,880	10,924
1986	5,722	---	---	17,802	1,141	---	24,665	26,239	---	1,060	---	27,299	8,291
1987	7,409 5/	---	---	23,560 5/	875	---	31,844	30,820	---	920	---	31,740	8,394
1988	8,761 5/	---	---	26,203 5/	861	---	35,825	33,970	---	1,260	---	35,230	8,990
Projected:													
Alternative A:													
1989	10,842	$1,505	$ 0	31,043	774	$ 65	44,229	38,842	$ 0	1,119	$134	40,095	13,126
1990	11,477	1,962	2,545	32,705	909	324	49,922	45,013	1,850	1,180	150	48,193	14,853
1991	12,077	2,207	2,534	39,430	824	508	57,580	52,019	3,250	1,238	68	56,575	15,858
Alternative B:													
1989	10,842	1,505	0	31,044	775	66	44,232	38,854	0	1,122	134	40,110	13,112
1990	11,477	1,963	2,584	32,791	915	339	50,069	45,082	1,850	1,180	150	48,262	14,919
1991	12,238	2,208	2,597	39,444	833	547	57,867	52,237	3,270	1,242	68	56,817	15,969

1/ The payments shown as being from the general fund of the Treasury include certain interest-adjustment items.
2/ Other income includes recoveries of amounts reimbursed from the trust fund which are not obligations of the trust fund and other miscellaneous income.
3/ The financial status of the program depends on both the total net assets and the liabilities of the program. (See Table 9).
4/ Section 708 of Title VII of the Social Security Act modified the provisions for the delivery of Social Security benefit checks when the regularly designated delivery day falls on a Saturday, Sunday, or legal public holiday. Delivery of benefit checks normally due January, 1982 occurred on December 31, 1981. Consequently, the SMI premiums withheld from the checks ($264 million) and the general revenue matching contributions ($883 million) were added to the SMI trust fund on December 31, 1981. These amounts are excluded from the premium income and general revenue income for CY 1982.
5/ Delivery of benefit checks normally due January, 1988 occurred on December 31, 1987. Consequently, the SMI premiums withheld from the checks ($692 million) and the general revenue matching contributions ($2178 million) were added to the SMI trust fund on December 31, 1987. These amounts are excluded from the premium income and general revenue income for CY 1988. (Refer to footnote 4)

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Table 7 shows the calendar year average increase in aggregate and per capita benefit payments through CY 1991. To reflect the size of the program relative to the economy as a whole, Table 7 also shows SMI benefit expenditures as a percent of Gross National Product (GNP). During CY 1988, the program grew 10.2 percent on an aggregate basis, grew 8.1 percent on a per capita basis, and increased from .68 to .70 percent of GNP. All three measures of program growth are expected to increase during the projection period, under both Alternatives A and B.

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Table 7.-- GROWTH IN TOTAL CASH BENEFITS UNDER THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM THROUGH DECEMBER 31, 1991

Calender year	Aggregate benefits (millions)	Percent change	Per capita benefits	Percent change	SMI benefits as a percent of GNP
Historical:					
1967	$1,197		$66.97		0.15
1968	1,518	26.8	82.27	22.8	0.17
1969	1,865	22.9	97.86	19.0	0.19
1970	1,975	5.9	101.30	3.5	0.19
1971	2,117	7.2	106.68	5.3	0.19
1972	2,325	9.8	114.91	7.7	0.19
1973	2,526	8.6	122.02	6.2	0.19
1974	3,318	31.4	144.47	18.4	0.23
1975	4,273	28.8	179.96	24.6	0.27
1976	5,080	18.9	207.39	15.2	0.29
1977	6,038	18.9	239.27	15.4	0.30
1978	7,252	20.1	279.58	16.8	0.32
1979	8,708	20.1	326.86	16.9	0.35
1980	10,635	22.1	389.87	19.3	0.39
1981	13,113	23.3	471.15	20.8	0.43
1982	15,455	17.9	545.55	15.8	0.49
1983	18,106	17.2	627.79	15.1	0.53
1984	19,661	8.6	670.77	6.8	0.52
1985	22,947	16.7	768.25	14.5	0.57
1986	26,239	14.3	859.84	11.9	0.62
1987	30,820	17.5	991.76	15.3	0.68
1988	33,970	10.2	1,072.15	8.1	0.70
Projected:					
Alternative A:					
1989	38,842	14.3	1,199.42	11.9	0.75
1990	46,863	20.7	1,421.00	18.5	0.84
1991	55,269	17.9	1,647.51	15.9	0.94
Alternative B:					
1989	38,854	14.4	1,199.79	11.9	0.75
1990	46,932	20.8	1,423.09	18.6	0.85
1991	55,507	18.3	1,654.60	16.3	0.94

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ACTUARIAL STATUS OF THE TRUST FUND

1. ACTUARIAL SOUNDNESS OF THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM

The concept of actuarial soundness, as it applies to the SMI program, is closely related to the concept as it applies to private group insurance. The SMI program essentially is yearly renewable term insurance financed from premium income paid by the enrollees and from income contributed from general revenue. Consequently, the income to the program during a 12-month period for which financing is being established should be sufficient to maintain assets at a level to pay for services (including associated administrative costs) expected to be rendered during that period, even though payment for some of these services will not be made until after the close of the period. The portion of income required to cover those benefits not paid until after the close of the year should be added to the trust fund until needed. Thus, the assets in the trust fund at any time should be no less than the costs of the benefits and administration incurred but not yet paid.

The law requires the Secretary of Health and Human Services to establish income for basic coverage on the basis of incurred costs (including associated administrative costs) for the 12-month period for which financing is being established. Financing on an incurred basis means that income should be sufficient to cover the cost of services rendered during the period. However, since the income per enrollee (premium plus Government contribution rate) is established prospectively, it is subject to projection error. Additionally, legislation enacted after the financing has been established but effective for the period for which

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financing has been set, may affect program costs. As a result, the income to the program may not be equal to incurred costs; therefore, trust fund assets should be maintained at a level which is adequate to cover the impact of a moderate degree of variation between actual and projected costs, as well as the value of incurred but unpaid expenses.

As discussed in the "Nature of the Trust Fund" section, catastrophic coverage monthly premiums and supplemental catastrophic coverage premium rates have been established by law for various periods of time as well as the manner in which they will be determined beyond those periods. The catastrophic income will be added to the trust fund assets when it is received during the financing period.

In testing the actuarial soundness of the SMI program, it is not appropriate to look beyond the period for which the enrollee premium rates and level of general revenue financing have been established. The primary tests of actuarial soundness, then, are that: (1) assets and income for years for which financing has been established be sufficient to meet the projected benefits and associated administrative expenses incurred for that period and (2) assets be sufficient to cover projected liabilities that will have been incurred by the end of that time but will not have been paid yet. Even if these tests of actuarial soundness are not met, the program can continue to operate if the trust fund remains at a level adequate to permit the payment of claims as presented. However, to protect against the possibility that cost increases under the program will be higher than assumed, assets should be sufficient to include contingency levels to cover the impact of a moderate degree of variation between actual and projected costs.

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Contingency levels to accommodate cost increases that may be higher than expected are measured by the excess of assets over liabilities. An appropriate target level for this excess depends on numerous factors. The most important of these factors are: (1) the difference from prior years in the actual performance of the program and the estimates made at the time financing was established and (2) the expected relationship between incurred and cash expenditures. Ongoing analysis is made of the former as trends in the differences vary over time.

2. INCURRED EXPERIENCE OF THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM

The tests of actuarial soundness of the SMI program noted above rely on the incurred experience of the program. Cash disbursements for benefits and administrative expenses by themselves are misleading, due to the relatively large liabilities outstanding at any time for benefits and processing costs. Outstanding liabilities result from the lag between the time that services are performed and the time that payments for them are made.

The experience of the program is substantially more difficult to determine on an incurred basis than on a cash basis. Payment for some services is reported only on a cash basis, and the incurred experience must be inferred from the cash payment information. For recent time periods, the tabulations of bills are incomplete due to normal processing delays. Finally, since bills are tabulated only for a sample of beneficiaries, the data is subject to bias and random fluctuation inherent in the sampling process.

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Table 8 shows the estimated transactions of the trust fund on an incurred basis. For the reasons stated above, the incurred experience must be viewed as an estimate even for historical years. Various checks, such as cash outlay data, assure that the estimates are reasonably close, however.

3. ACCUMULATED EXCESS OF ASSETS OVER LIABILITIES

The liability outstanding at any time for the cost of services performed for which no payment has been made is referred to as "benefits incurred but unpaid." Estimates of the amount of benefits incurred but unpaid as of the end of each financing period, and of the administrative expenses related to processing these benefits, appear in Table 9. For some years of the program, assets have not been as large as outstanding liabilities. Nonetheless, the fund has remained positive, allowing claims to be paid.

Program financing has been established for all components of SMI through December 31, 1989. The financing for basic coverage for CY 1989 was designed to maintain the excess of assets over liabilities as a percent of incurred expenditures for basic coverage for the following year. However, this was accomplished by including specific margins to increase the excess of assets over liabilities for the aged and to reduce it for the disabled. Since that time, the experience of the basic program appears to be better than expected. Furthermore, beginning in CY 1989, the SMI transactions of the Medicare Catastrophic Coverage Account will be added to the trust fund. For CY 1989, these transactions are primarily income transactions since SMI catastrophic benefits are not effective until January 1, 1990. As a result of both the more favorable experience of the basic program and the catastrophic transactions, the excess of assets over liabilities is

Table 8.--ESTIMATED INCOME AND DISBURSEMENTS INCURRED UNDER SUPPLEMENTARY MEDICAL INSURANCE PROGRAM FOR FINANCING PERIODS THROUGH DECEMBER 31, 1989
(In millions)

Financing period	Premiums from enrollees			Government contributions	Interest and other income		Benefits payments		Administrative Expenses		Net operations in year
	Basic	Catastrophic coverage	Supplemental		Basic	Catastrophic	Basic	Catastrophic	Basic	Catastrophic	
Historical:											
12-month period ending June 30,											
1967	$ 647	---	---	$ 647	$ 15	---	$ 1,109	---	$ 123 1/	---	$ 77
1968	698	---	---	698	21	---	1,443	---	155	---	-181
1969	903	---	---	903	24	---	1,750	---	198	---	-118
1970	936	---	---	936	12	---	1,929	---	213	---	-258
1971	1,253	---	---	1,253	18	---	2,090	---	259	---	175
1972	1,340	---	---	1,340	29	---	2,289	---	259	---	161
1973	1,427	---	---	1,426	45	---	2,500	---	302	---	96
1974	1,704	---	---	2,031	76	---	3,149	---	353	---	309
1975	1,887	---	---	2,396	105	---	3,928	---	438	---	22
1976	1,951	---	---	2,972	109	---	4,818	---	485	---	-271
1977	2,156	---	---	4,697	157	---	5,861	---	515	---	634
1978	2,358	---	---	5,991	254	---	6,948	---	511	---	1,144
1979	2,601	---	---	6,570	365	---	8,171	---	649	---	716
1980	2,823	---	---	6,627	421	---	9,938	---	645	---	-712
1981	3,178	---	---	8,219	371	---	12,054	---	692	---	-978
1982	3,757	---	---	12,488	495	---	14,061	---	728	---	1,931
1983	4,202	---	---	13,951	686	---	17,071	---	708	---	1,060
Transition semester 2/	2,120	---	---	7,836	374	---	9,721	---	483	---	126
Calendar year											
1984	5,167	---	---	17,052	962	---	20,266	---	869	---	2,046
1985	5,613	---	---	18,243	1,248	---	22,776	---	986	---	1,342
1986	5,722	---	---	17,802	1,141	---	26,656	---	1,000	---	-2,991
1987	6,717	---	---	21,377	880	---	31,073	---	1,008	---	-3,107
1988	9,453	---	---	28,339	903	---	35,143	---	1,059	---	2,493
Projected:											
Calendar year											
Alternative A:											
1989	10,842	$1,505	$0	31,019	798	$65	39,806	$0 3/	1,119	$134	3,170
Alternative B:											
1989	10,842	1,505	0	31,019	800	66	39,820	0 3/	1,122	134	3,156

1/ Includes administrative expenses incurred prior to the beginning of the program.
2/ The transition semester is the 6-month period July 1, 1983 to December 31, 1983.
3/ Catastrophic SMI benefits are effective beginning January 1, 1990.

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Table 9.--SUMMARY OF ESTIMATED ASSETS AND LIABILITIES OF THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM AS OF THE END OF THE FINANCING PERIOD, FOR PERIODS THROUGH DECEMBER 31, 1989
(Dollar amounts in millions)

	Balance in trust fund	Government contributions due but unpaid	Total assets	Benefits incurred but unpaid	Administrative costs incurred but unpaid	Total liabilities	Excess of assets over liabilities	Ratio 1/
Historical:								
As of June 30,								
1967	$ 486	$ 24	$ 510	$ 445	$ -12	$ 433	$ 77	0.05
1968	307	88	395	498	1	499	-104	-0.05
1969	378	7	385	603	4	607	-222	-0.10
1970	57	15	72	553	0	553	-481	-0.21
1971	290	22	312	608	11	619	-307	-0.12
1972	481	-3	478	642	-19	623	-145	-0.05
1973	746	-7	739	751	37	788	-49	-0.01
1974	1,272	-5	1,267	1,026	-19	1,007	260	0.06
1975	1,424	67	1,491	1,189	14	1,203	288	0.05
1976	1,219	106	1,325	1,335	-29	1,306	19	0.00
1977	2,170	91	2,261	1,607	3	1,610	651	0.09
1978	3,786	48	3,834	1,998	40	2,038	1,796	0.20
1979	4,880	2	4,882	2,249	123	2,372	2,510	0.24
1980	4,657	0	4,657	2,671	188	2,859	1,798	0.14
1981	3,801	0	3,801	2,967	13	2,980	821	0.06
1982	5,534	1	5,535	2,792	-9	2,783	2,752	0.16
1983	6,780	2	6,782	3,018	-48	2,970	3,812	0.19
As of December 31,								
1983	7,070	1	7,071	3,201	-69	3,132	3,939	0.19
1984	9,698	2	9,700	3,806	-91	3,715	5,985	0.25
1985	10,924	0	10,924	3,635	-38	3,597	7,327	0.27
1986	8,291	0	8,291	4,052	-98	3,954	4,337	0.14
1987	8,394 2/	0	8,394 2/	4,305	-11	7,164 2/	1,230	0.03
1988	8,990	0	8,990	5,479	-212	5,267	3,723	0.09
Projected:								
Alternative A:								
1989 3/	13,124	0	13,124	6,643	-212	6,231	6,893	0.14
Alternative B:								
1989 3/	13,112	0	13,112	6,645	-212	6,233	6,879	0.14

1/ Ratio of the excess of assets over liabilities to the following year's total incurred expenditures.
2/ Section 708 of Title VII of the Social Security Act modified the provisions for the delivery of Social Security benefit checks when the regularly designated day falls on a Saturday, Sunday, or legal public holiday. Delivery of benefit checks normally due January, 1988 occurred on December 31, 1987. Consequently, the SMI premiums withheld from the checks ($692 million) and the general revenue matching contributions ($2,178 million) were added to the SMI trust fund on December 31, 1987 and were included in the liabilities.
3/ Beginning CY 1989, the transactions of Medicare Catastrophic Coverage Account are included in the assets and liabilities of the trust fund.

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expected to increase from $3,723 million at the end of December 1988 to $6,893 million under alternative A and $6,879 million under alternative B. This excess as a percent of incurred expenditures for the following year is expected to increase from 9.1 percent as of December 31, 1988 to 13.8 percent as of December 31, 1989.

4. SENSITIVITY TESTING

Some of the assumptions underlying the projections presented in this report are highly uncertain, and variations in these assumptions would have a substantial impact on expenditures. In order to test the future status of the program under varying assumptions, a low cost projection and a high cost projection were prepared by varying these key assumptions. The low and high cost alternative sets of assumptions are intended to reflect growth rates for the various components of program costs which are more favorable and adverse, respectively, than those of the intermediate projections (Alternatives A and B) and which are not unreasonable themselves in light of the nature and historical experience of the program. As such, they provide a range of financial outcomes within which the actual experience of the program might reasonably be expected to fall. The values for the alternative assumptions were determined from a study on the average historical variation in the respective increase factors.

Table 10 indicates that, under the low cost assumptions, trust fund assets would exceed liabilities by the end of December 1989 (the period through which financing for all components has been established), reaching a level of 22.0 percent of the following year's incurred expenditures. If these low growth rates were actually to materialize, then subsequent financing rates would be adjusted downward in order to lower the excess of assets over liabilities to an appropriate

Table 10.--ACTUARIAL STATUS OF THE SMI TRUST FUND UNDER THREE SETS OF ASSUMPTIONS FOR FINANCING PERIODS THROUGH DECEMBER 31, 1989

	Alternative B projection			Low cost projection			High cost projection		
	12-Month period ending June 30,			12-Month period ending June 30,			12-Month period ending June 30,		
	1988	1989	1990	1988	1989	1990	1988	1989	1990
Projection factors (in percent): 1/									
Physician fees 2/									
Aged	4.3	2.5	3.3	4.2	2.3	2.5	4.3	2.8	4.1
Disabled	4.3	2.5	3.3	4.2	2.3	2.5	4.3	2.8	4.1
Utilization of physician services 3/									
Aged	6.2	5.2	6.6	5.4	3.3	5.0	7.0	7.1	8.3
Disabled	6.0	4.4	6.8	4.9	0.2	2.2	7.1	8.6	11.6
Outpatient hospital services per enrollee									
Aged	12.3	7.9	17.5	10.2	2.4	9.1	14.3	13.3	26.0
Disabled	22.2	7.0	16.0	17.4	2.4	3.5	26.9	11.5	28.5
	As of December 31,			As of December 31,			As of December 31,		
	1987 4/	1988	1989	1987 4/	1988	1989	1987 4/	1988	1989
Actuarial status (in millions):									
Assets	$8,394	$8,990	$13,112	$8,394	$8,990	$15,074	$8,394	$8,990	$11,032
Liabilities	7,164	5,267	6,233	6,997	4,281	5,057	7,331	6,267	7,435
Assets less liabilities	1,230	3,723	6,879	1,397	4,709	10,017	1,063	2,723	3,597
Ratio of assets less liabilities to expenditures (in percent) 5/	3.4	9.1	13.8	3.9	12.1	22.0	2.9	6.3	6.6

1/ Because of the manner in which alternative economic assumptions affect the projected operations of the SMI program, there is not a substantial difference in the projections based upon the two sets of assumptions. Therefore only one projection, Alternative B is presented here. Appendix A presents an explanation of the effects of Alternative A and Alternative B on the projections in the report. These increases represent increases of basic SMI services.

2/ As recognized for payment under the program.

3/ Increase in the number of services received per enrollee and greater relative use of more expensive services.

4/ Section 708 of Title VII of the Social Security Act modified the provisions for the delivery of Social Security benefit checks when the regularly designated delivery day falls on a Saturday, Sunday, or legal public holiday. Delivery of benefit checks normally due January, 1988 occurred on December 31, 1987. Consequently, the SMI premiums withheld from the checks ($692 million) and the general revenue matching contributions ($2,178 million) were added to the SMI trust fund on December 31, 1987 and were included in the liabilities.

5/ Ratio of assets less liabilities at the end of the year to total incurred expenditures during the following year, expressed as a percent.

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level to maintain the actuarial soundness of the trust fund. Under the high cost assumptions, trust fund assets would still exceed liabilities by the end of December 1989, reaching a level of 6.6 percent of the following year's incurred expenditures. Therefore, even if these high growth rates were to occur, assets would still be sufficient to cover outstanding liabilities.

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CONCLUSION

The financing for all components of the SMI program has been established through December 1989. Financing for basic coverage was established by the setting of the standard monthly premium rate (paid by or on behalf of each enrollee) of $27.90 for CY 1989 and of actuarial rates that determine the amount to be contributed from general revenue on behalf of each enrollee. General revenue contributions are expected to account for 72.8 percent of all SMI income for basic coverage during CY 1989. Financing for catastrophic coverage was established by the setting of the catastrophic coverage monthly premium (paid by or on behalf of each enrollee) of $4.00 (for most enrollees) for CY 1989 and of the supplemental catastrophic coverage premium rate of $22.50 for each $150 of adjusted income tax liability for individuals who are Medicare-eligible for more than six months in the taxable year 1989.

Under both sets of intermediate assumptions used in this report, income is projected to exceed disbursements during CY 1989 and CY 1990. Income is composed of premiums paid by the enrollees for both basic and catastrophic coverage, general revenue contributions, and interest earned by the trust fund. As a result, the assets in the trust fund on a cash basis are projected to increase from $9.0 billion at the end of CY 1988 to an estimated $13.1 billion at the end of CY 1989 and then to increase to an estimated $14.9 billion at the end of CY 1990.

The financing for basic coverage for CY 1989 was established to increase aged assets and to decrease disabled assets while maintaining the overall relative level of the excess of assets over liabilities. However, since that time, the experience of the basic program appears to be more favorable than expected. In addition, beginning in CY 1989, the SMI transactions of the Medicare Catastrophic Coverage

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Account will be added to the SMI trust fund. For CY 1989, these transactions are primarily income transactions since SMI catastrophic benefits are not effective until January 1, 1990. As a result of both of these situations, the excess of assets over liabilities is expected to increase from $3,723 million at the end of December 1988 to $6,893 million under alternative A, and $6,879 million under alternative B, by the end of December 1989, representing 13.8 percent of the projected incurred expenditures. Under more pessimistic assumptions as to cost increases, assets based on financing already established will still be sufficient to cover outstanding liabilities. Hence, the financing established through December 1989 is sufficient to cover projected benefit and administrative costs incurred through that time period, and to maintain a level of trust fund assets adequate to cover the impact of a moderate degree of variation between actual and projected costs.

Although the SMI program is financially sound, the Board notes with concern the rapid growth in the cost of the program. Growth rates have been so rapid that outlays of the program have nearly doubled in the past five years. For the same time period, the program grew 32 percent faster than the economy as a whole. This growth rate shows no sign of abating despite recent efforts to control the cost of the program.

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APPENDIX A

ACTUARIAL METHODOLOGY AND PRINCIPAL ASSUMPTIONS FOR COST ESTIMATES FOR THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM

1. ESTIMATES FOR BASIC COVERAGE FOR AGED AND DISABLED (EXCLUDING ESRD) ENROLLEES

a. Introduction

Estimates for aged and disabled enrollees—excluding disabled persons with end stage renal disease (ESRD)—for basic SMI coverage, which is defined to be non-catastrophic coverage, are prepared by calculating reasonable charges incurred per enrollee in a recent year (the 12-month period ending June 30, 1987, for this report) and projecting these charges through the estimating period. The per enrollee charges are then converted to reimbursement amounts by subtracting the per enrollee values of the deductible and coinsurance. Aggregate reimbursement amounts are calculated by multiplying the per enrollee reimbursement amounts by the projected enrollment. In order to estimate cash disbursements, an allowance is made for the delay between receipt of service and payment therefor.

Disabled persons with ESRD have per enrollee costs which are higher and quite different in nature from those of most other disabled persons. Hence, basic program costs for them have been excluded from the analysis in this section and are included in a later section. Also, cost estimates for services covered under the "Medicare Catastrophic Coverage Act of 1988" (Public Law 100-360) are excluded from the analysis in this section and are shown in a later section.

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b. Establishing a Projection Base

(1) Physician Services

Reimbursement amounts for physician services (and smaller amounts for other services such as laboratory tests, durable medical equipment and supplies) are paid through organizations acting for the Health Care Financing Administration, referred to as "carriers." The carriers determine whether billed services are covered under the program and determine the reasonable charges for the services. A record of the amount reimbursed after reduction for coinsurance and the deductible is transmitted to the central office in the form of a "payment record."

Payment records for 0.1 percent of aged beneficiaries and 1.0 percent of disabled beneficiaries are tabulated by date of service, thus providing a data base which is constructed on an incurred basis. Certain minor adjustments are made to the tabulated sample data to correct for biases and random fluctuation inherent in the sampling process. Having the data on an incurred basis is necessary to meet the statutory requirement that the program be financed on this basis.

As a check on the validity of the projection base, incurred reimbursement amounts are compared with cash expenditures reported by the carriers through an independent reporting system. In a program with continuously increasing incurred reimbursement amounts, cash payments are expected to be slightly lower than incurred expenses (except in the first year of coverage of a service or group of beneficiaries, when the difference should be substantial). These differences between cash and incurred reimbursement amounts occur because of the lag between receipt of services and payment therefor.

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(2) Institutional and Other Services

Reimbursement amounts for institutional services under the SMI program are paid by the same fiscal intermediaries that pay for HI services. The principal institutional services covered under the SMI program are outpatient hospital care services.

Reimbursements for institutional services occur in two stages. Provider bills are submitted to the intermediaries, and interim payments are made on the basis of these bills. The bills are then submitted to the central office, and tabulations for a sample of beneficiaries are prepared in a manner parallel to that for payment records.

At the close of a provider's accounting period, a cost report is submitted, and lump-sum payments or recoveries are made to correct for the difference between interim payments made to the provider and the retroactively determined reasonable cost for providing covered services (net of coinsurance and deductible amounts). However, the cost of laboratory tests in outpatient departments of hospitals is no longer determined on a reasonable-cost basis but on a fee-schedule basis. The amounts of these retroactive settlements are reported on a cash basis, and approximations are necessary to allocate these payments to the time of service.

Group practice plans, which are not reimbursed through carriers, are reimbursed directly by the Health Care Financing Administration on a reasonable cost or on a capitation basis. Comprehensive data on such direct reimbursements are available on a cash basis. Certain approximations must be made to allocate expenses to the period when services were rendered.

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(3) Summary of Historical Data

Table A1 summarizes the incurred reimbursement amounts per enrollee for the various services for each of the 12-month periods ending June 30, through 1987. Also shown are average enrollment figures for these years. In order to analyze the historical trends in prices and use of services, these reimbursement amounts are converted to the reasonable charges or reasonable costs on which reimbursement was based. This process is necessary largely because the fixed deductible becomes a smaller percentage of charges each year and thus causes reimbursement to rise faster than charges or costs. Table A2 shows the reasonable charges or costs per enrollee corresponding to the reimbursement values shown in Table A1.

c. Per Enrollee Increases

(1) Physician Services

Per enrollee charges for physician services are affected by a variety of factors. One factor, increase in average charge per service, can be identified explicitly. Others can be recognized only by the fact that the increase in the average charge per service does not explain all of the increase in per enrollee charges year-to-year.

Increases in average charge per service are one of the most important elements creating increasing charges per enrollee. The physician fee component of the CPI provides an estimate of the historical increases in submitted charge per service. Increases in this index are shown in the first column of Table A3.

Table A1.--INCURRED REIMBURSEMENT AMOUNTS PER ENROLLEE: HISTORICAL

Year ending June 30,	Average enrollment (millions)	All services	Physician	Outpatient hospital	Home health agency	Group practice prepayment plan	Independent lab
Aged:							
1967	17.750	$62.51	$59.12	$1.41	$0.79	$0.89	$0.30
1968	18.038	80.06	74.47	2.40	1.49	1.35	0.35
1969	18.833	92.91	84.87	4.20	1.91	1.53	0.40
1970	19.312	99.91	90.03	5.91	1.99	1.50	0.48
1971	19.664	106.25	95.05	7.53	1.67	1.40	0.60
1972	20.043	114.22	101.63	8.55	1.60	1.66	0.78
1973	20.428	122.39	107.98	9.43	2.17	1.87	0.94
1974	20.988	134.38	117.48	11.32	2.03	2.35	1.20
1975	21.504	160.26	136.28	15.45	3.83	3.06	1.64
1976	22.089	188.60	156.27	21.26	5.19	3.86	2.02
1977	22.605	221.38	179.30	28.68	6.52	4.41	2.47
1978	23.133	254.19	207.05	33.38	6.82	4.02	2.92
1979	23.693	289.55	233.99	40.51	6.86	4.87	3.32
1980	24.286	343.02	277.24	47.10	7.58	7.04	4.06
1981	24.826	407.45	328.14	56.75	8.04	9.13	5.39
1982	25.363	465.33	381.02	66.40	0.52	10.92	6.47
1983	25.873	559.47	456.15	81.69	0.77	13.53	7.33
1984	26.433	636.34	511.98	97.23	0.99	16.85	9.29
1985	26.914	684.87	536.78	112.60	1.05	19.35	15.09
1986	27.453	785.02	596.36	135.19	1.19	31.11	21.17
1987	28.077	912.03	676.60	166.86	0.98	41.70	25.89
Disabled (excluding ESRD):							
1974	1.638	116.64	97.58	13.88	3.45	1.08	0.65
1975	1.817	149.42	125.62	17.31	3.57	1.86	1.06
1976	2.019	178.77	148.31	21.69	5.12	2.19	1.46
1977	2.231	220.45	174.81	36.44	4.79	2.41	2.00
1978	2.423	256.27	202.91	42.76	5.53	2.47	2.60
1979	2.563	301.57	240.73	50.49	5.13	2.05	3.17
1980	2.642	363.35	288.42	60.70	6.09	4.31	3.83
1981	2.686	435.18	340.78	77.24	7.22	5.24	4.70
1982	2.685	517.56	395.46	109.91	0.00	6.31	5.88
1983	2.628	629.36	485.77	128.70	0.00	7.58	7.31
1984	2.593	676.78	529.98	129.44	0.00	8.38	8.98
1985	2.593	708.15	553.27	131.98	0.00	9.22	13.68
1986	2.629	778.92	594.44	152.80	0.00	12.51	19.17
1987	2.690	868.31	657.43	171.90	0.00	15.89	23.09

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Table A2.--INCURRED REASONABLE CHARGES OR COSTS PER ENROLLEE: HISTORICAL

Year ending June 30,	Average enrollment (millions)	All services	Physician	Outpatient hospital	Home health agency	Group practice prepayment plan	Independent lab
Aged:							
1967	17.750	$108.58	$102.70	$2.45	$1.37	$1.54	$0.52
1968	18.038	128.08	119.02	3.89	2.42	2.18	0.57
1969	18.833	144.18	131.22	6.77	3.08	2.47	0.64
1970	19.312	153.63	137.86	9.43	3.17	2.40	0.77
1971	19.664	162.10	144.41	11.89	2.64	2.21	0.95
1972	20.043	172.75	153.15	13.32	2.49	2.58	1.21
1973	20.428	186.21	163.99	14.79	3.02	2.94	1.47
1974	20.988	204.19	178.33	17.75	2.54	3.69	1.88
1975	21.504	236.59	201.27	23.51	4.66	4.66	2.49
1976	22.089	272.01	225.46	31.62	6.18	5.74	3.01
1977	22.605	313.23	253.83	41.77	7.60	6.43	3.60
1978	23.133	354.26	288.64	47.86	7.82	5.76	4.18
1979	23.693	398.80	322.19	57.28	7.76	6.88	4.69
1980	24.286	465.76	376.35	65.52	8.44	9.80	5.65
1981	24.826	545.32	438.85	77.76	8.81	12.51	7.39
1982	25.363	629.00	513.50	91.11	0.52	14.99	8.88
1983	25.873	754.81	614.84	110.89	0.77	18.36	9.95
1984	26.433	853.07	686.15	130.77	0.99	22.66	12.50
1985	26.914	901.87	707.65	151.96	1.05	26.12	15.09
1986	27.453	1022.36	776.94	181.33	1.19	41.73	21.17
1987	28.077	1176.02	871.82	221.88	0.98	55.45	25.89
Disabled (excluding ESRD):							
1974	1.638	171.05	143.26	20.99	4.17	1.64	0.99
1975	1.817	212.07	178.40	25.25	4.17	2.71	1.54
1976	2.019	250.18	207.77	31.24	5.90	3.16	2.11
1977	2.231	303.48	240.42	51.43	5.41	3.40	2.82
1978	2.423	349.58	276.50	59.80	6.19	3.45	3.64
1979	2.563	406.70	324.15	69.68	5.66	2.83	4.38
1980	2.642	484.22	383.85	82.66	6.63	5.87	5.21
1981	2.686	573.54	448.39	103.98	7.78	7.06	6.33
1982	2.685	687.66	523.32	147.93	0.00	8.49	7.92
1983	2.628	835.62	643.99	171.76	0.00	10.11	9.76
1984	2.593	897.68	702.43	172.16	0.00	11.15	11.94
1985	2.593	925.98	723.44	176.53	0.00	12.33	13.68
1986	2.629	1009.14	769.73	203.57	0.00	16.67	19.17
1987	2.690	1116.34	844.42	227.77	0.00	21.06	23.09

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Table A3.--COMPONENTS OF INCREASES IN TOTAL RECOGNIZED CHARGES PER ENROLLEE FOR PHYSICIAN SERVICES: HISTORICAL
(In percent)

Year ending June 30,	Increase due to price changes		Residual factors	Total increase in recognized charges per enrollee
	Increase in physician fee component of CPI	Net increase in reasonable charges		
Aged:				
1967	7.6			
1968	5.9	4.8	10.6	15.9
1969	6.2	3.9	6.2	10.3
1970	6.7	4.7	0.4	5.1
1971	7.5	4.5	0.3	4.8
1972	5.2	3.9	2.0	6.0
1973	2.6	2.0	5.0	7.1
1974	5.0	3.2	5.4	8.8
1975	12.8	8.9	3.6	12.8
1976	11.4	8.2	3.5	12.0
1977	10.2	9.0	3.3	12.6
1978	8.9	9.0	4.3	13.7
1979	8.6	7.8	3.6	11.7
1980	11.5	8.6	7.6	16.8
1981	11.1	7.7	8.3	16.6
1982	9.9	10.8	5.6	17.0
1983	8.2	8.9	9.9	19.7
1984	7.5	7.2	4.1	11.6
1985	6.0	0.8	2.3	3.1
1986	6.7	0.0	9.8	9.8
1987	7.5	4.4	7.5	12.2
Disabled (excluding ESRD):				
1974	5.0			
1975	12.8	8.9	14.3	24.5
1976	11.4	8.2	7.6	16.4
1977	10.2	9.0	6.2	15.7
1978	8.9	9.0	5.5	15.0
1979	8.6	7.8	8.8	17.3
1980	11.5	8.6	9.1	18.5
1981	11.1	7.7	8.4	16.7
1982	9.9	10.7	5.4	16.7
1983	8.2	8.9	13.0	23.1
1984	7.5	7.2	1.7	9.0
1985	6.0	0.8	2.2	3.0
1986	6.7	0.0	6.4	6.4
1987	7.5	4.4	5.1	9.7

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Bills submitted to the carriers during a specified period, the fee-screen year, are subject by statute to certain limitations on the level of fees to be recognized by the program for reimbursement purposes. Prior to the passage of Public Law 98-369, the fee-screen year was the 12-month period ending June 30. Public Law 98-369 changed the fee-screen year to the 12-month period ending September 30, effective on October 1, 1985, and Public Law 99-272 changed the fee-screen year to a calendar-year basis effective January 1, 1987. The fee level recognized for a particular service by a physician is subject to reduction if it exceeds the median charge that the physician assessed for the same service in the base period. Public Law 98-369 changed the base period from the preceding calendar year to the preceding 12-month period ending March 31, and Public Law 99-272 changed the base period to the preceding 12-month period ending June 30. This median charge is called the "customary charge." Fees are subject to further reduction if they exceed the prevailing charges for the locality. The prevailing charge is defined as the 75th percentile of customary charges for a particular service in a particular locality. Since July 1, 1975, the rate of increase in prevailing charges has been limited further by the application of the MEI. The customary and prevailing charge limits maintained by the carriers are called "fee screens." Reasonable charges are charges after they have been reduced by the fee screens and are the charges on which reimbursement is based.

Certain services included with the physician services are not subject to the same fee-screen reduction process as described above. Effective October 1, 1985, there is an additional screen considered for nonphysician services, supplies, and equipment. After applying the customary and prevailing charge screens, fees are further reduced if they exceed the inflation-indexed charge (IIC). The IIC

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represents the lowest of the reasonable charge screens from the preceding fee-screen year as adjusted by an inflation factor. Effective June 1, 1989 charges for oxygen and oxygen equipment are determined on the basis of a fee schedule updated by an inflation factor. Effective July 1, 1984 charges for laboratory tests performed in physician offices and independent laboratories are determined by fee schedules. These fee schedules are updated at the beginning of the fee-screen year by an inflation adjustment factor.

Since legislation has twice changed the time span of the fee-screen year, and since the two transitional fee-screen years (1985 and 1986) cover 15-month periods, data presented in Tables A1 through A8 will be displayed for the same 12-month basis for all years. This basis will be the 12-month periods ending June 30.

The average reduction in submitted fees has increased almost every year due both to administrative actions and to differentials in the rate of increase in fees between the period in which the fee screens are established and the period in which the screens are applied. The result is that the net increase in per enrollee charges due to price changes (i.e., the increase in fee levels recognized for reimbursement purposes) has been less than the increase in submitted fees. The second column of Table A3 shows this increase in per enrollee charges due to price changes.

Per capita charges also have increased each year as a result of a number of possible factors including more physician visits per enrollee, the aging of the Medicare enrollment, greater use of specialists and more expensive techniques, and certain administrative actions. The third column of Table A3 shows the increases in charges per enrollee resulting from these residual causes. Because the measurement of increased recognized charges per service is subject to error, this error is included implicitly under residual causes.

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The last column of Table A3 shows the total increases in charges per enrollee for physician services. It includes the effects of all the items discussed above.

Projected increases in total recognized charges per enrollee are shown in Table A4. It compares with the corresponding historical data shown in Table A3. Column 1 of Table A4 shows the projected increases in the physician fee component of the CPI in each of the years ending June 30, 1988 through June 30, 1992. It represents an estimate of projected increases in the submitted fees disregarding the impact of the maximum allowable actual charges (MAAC). Column 2 shows the projected net increases in reasonable charges, and column 3 shows the increases due to residual causes.

(2) Institutional and Other Services

The historical and projected increases in charges or costs per enrollee for institutional and other services are shown in Table A5. The year-to-year changes in some services have been quite erratic. Because these series provide only a rough indication of future trends in costs, identical series of increase factors are used for Alternative A and Alternative B.

d. Projected Charges and Costs

Table A6 shows projections of per enrollee incurred charges and costs based on the assumptions in Tables A4 and A5. Table A7 shows the total reimbursement amounts per enrollee that result from subtracting the average amounts of copayment per enrollee from the total covered charges in Table A6. The aggregate

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Table A4.--COMPONENTS OF INCREASES IN TOTAL RECOGNIZED CHARGES PER ENROLLEE FOR PHYSICIAN SERVICES: PROJECTED
(In percent)

Year ending June 30,	Increase due to price changes		Residual factors	Total increase in recognized charges per enrollee
	Increase in physician fee component of CPI	Net increase in reasonable charges		
Alternative A:				
Aged:				
1988	7.2	4.3	6.2	10.8
1989	7.3	2.5	5.2	7.8
1990	7.6	3.2	6.6	10.0
1991	5.6	4.3	6.5	11.1
1992	6.2	5.2	5.7	11.2
Disabled (excluding ESRD):				
1988	7.2	4.3	6.0	10.6
1989	7.3	2.5	4.4	7.0
1990	7.6	3.2	6.8	10.2
1991	5.6	4.3	7.1	11.7
1992	6.2	5.2	6.1	11.6
Alternative B:				
Aged:				
1988	7.2	4.3	6.2	10.8
1989	7.6	2.5	5.2	7.8
1990	8.5	3.3	6.6	10.1
1991	6.7	4.6	6.5	11.4
1992	7.6	5.7	5.7	11.7
Disabled (excluding ESRD):				
1988	7.2	4.3	6.0	10.6
1989	7.6	2.5	4.4	7.0
1990	8.5	3.3	6.8	10.3
1991	6.7	4.6	7.1	12.0
1992	7.6	5.7	6.1	12.1

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Table A5.--INCREASES IN RECOGNIZED CHARGES AND COSTS PER ENROLLEE FOR INSTITUTIONAL AND OTHER SERVICES
(In percent)

Year ending June 30,	Outpatient hospital	Home health agency	Group practice prepayment plan	Independent lab
Aged:				
Historical:				
1968	58.8	76.6	41.6	9.6
1969	74.0	27.3	13.3	12.3
1970	39.3	2.9	-2.8	20.3
1971	26.1	-16.7	-7.9	23.4
1972	12.0	-5.7	16.7	27.4
1973	11.0	21.3	14.0	21.5
1974	20.0	-15.9	25.5	27.9
1975	32.5	83.5	26.3	32.4
1976	34.5	32.6	23.2	20.9
1977	32.1	23.0	12.0	19.6
1978	14.6	2.9	-10.4	16.1
1979	19.7	-0.8	19.4	12.2
1980	14.4	8.8	42.4	20.5
1981	18.7	4.4	27.7	30.8
1982	17.2	-94.1	19.8	20.2
1983	21.7	48.1	22.5	12.0
1984	17.9	28.6	23.4	25.6
1985	16.2	6.1	15.3	20.7
1986	19.3	13.3	59.8	40.3
1987	22.4	-17.6	32.9	22.3
Projected:				
1988	12.3	26.4	46.1	27.8
1989	7.9	7.5	15.1	9.4
1990	17.5	7.5	21.2	21.3
1991	18.2	7.5	21.2	21.1
1992	17.3	7.5	20.2	18.9
Disabled (excluding ESRD):				
Historical:				
1975	20.3	0.0	65.2	55.6
1976	23.7	41.5	16.6	37.0
1977	64.6	-8.3	7.6	33.6
1978	16.3	14.4	1.5	29.1
1979	16.5	-8.6	-18.0	20.3
1980	18.6	17.1	107.4	18.9
1981	25.8	17.3	20.3	21.5
1982	42.3	0.0	20.3	25.1
1983	16.1	0.0	19.1	23.2
1984	0.2	0.0	10.3	22.3
1985	2.5	0.0	10.6	14.6
1986	15.3	0.0	35.2	40.1
1987	11.9	0.0	26.3	20.4
Projected:				
1988	22.2	0.0	39.4	28.4
1989	7.0	0.0	13.0	8.3
1990	16.1	0.0	17.8	23.8
1991	16.6	0.0	14.6	23.8
1992	16.0	0.0	14.9	19.0

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Table A6.--INCURRED REASONABLE CHARGES OR COSTS PER ENROLLEE: PROJECTED

Year ending June 30,	All services	Physician	Outpatient hospital	Home health agency	Group practice prepayment plan	Independent lab
Alternative A:						
Aged:						
1988	$1,330.05	$ 965.65	$249.09	$1.24	$ 80.99	$33.08
1989	1,441.00	1,041.58	268.68	1.33	93.21	36.20
1990	1,620.43	1,146.56	315.78	1.43	112.89	43.77
1991	1,838.67	1,274.39	373.16	1.54	136.80	52.78
1992	2,082.59	1,416.63	437.74	1.66	164.40	62.16
Disabled (excluding ESRD):						
1988	1,270.40	933.12	278.26	0.00	29.37	29.65
1989	1,362.01	999.07	297.66	0.00	33.18	32.10
1990	1,525.20	1,101.29	345.44	0.00	39.08	39.39
1991	1,725.93	1,230.32	402.67	0.00	44.77	48.17
1992	1,949.37	1,373.33	467.07	0.00	51.43	57.54
Alternative B:						
Aged:						
1988	1,330.05	965.65	249.09	1.24	80.99	33.08
1989	1,441.00	1,041.58	268.68	1.33	93.21	36.20
1990	1,621.38	1,147.35	315.77	1.43	112.93	43.90
1991	1,843.25	1,278.55	373.16	1.54	136.83	53.17
1992	2,095.24	1,428.17	437.77	1.66	164.41	63.23
Disabled (excluding ESRD):						
1988	1,270.40	933.12	278.26	0.00	29.37	29.65
1989	1,362.01	999.07	297.66	0.00	33.18	32.10
1990	1,526.40	1,102.15	345.43	0.00	39.08	39.74
1991	1,731.56	1,234.51	403.08	0.00	44.77	49.20
1992	1,962.27	1,384.87	467.42	0.00	51.43	58.55

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Table A7.--INCURRED REIMBURSEMENT AMOUNTS: PROJECTED

Year ending June 30,	Average enrollment (millions)	Reimbursement amounts	
		Per enrollee	Aggregate (millions)
Alternative A:			
Aged:			
1988	28.471	$1,037.30	$29,533
1989	29.187	1,127.87	32,919
1990	29.736	1,274.78	37,907
1991	30.249	1,453.47	43,966
1992	30.749	1,653.03	50,829
Disabled (excluding ESRD):			
1988	2.732	993.41	2,714
1989	2.800	1,068.57	2,992
1990	2.865	1,202.09	3,444
1991	2.923	1,366.75	3,995
1992	2.985	1,550.08	4,627
Alternative B:			
Aged:			
1988	28.471	1,037.30	29,533
1989	29.187	1,127.87	32,919
1990	29.736	1,275.59	37,931
1991	30.249	1,457.27	44,081
1992	30.749	1,663.60	51,154
Disabled (excluding ESRD):			
1988	2.732	993.41	2,714
1989	2.800	1,068.57	2,992
1990	2.865	1,203.14	3,447
1991	2.923	1,371.54	4,009
1992	2.985	1,560.80	4,659

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reimbursement amounts shown are derived by multiplying average enrollment by average reimbursement per enrollee.

2. ESTIMATES FOR BASIC COVERAGE FOR PERSONS SUFFERING FROM END STAGE RENAL DISEASE

Certain persons suffering from ESRD have been eligible to enroll for SMI coverage since July 1973 (under Section 299I of Public Law 92-603). For analytical purposes, those enrollees suffering from ESRD who are also eligible as disability insurance beneficiaries are included in this section because their per enrollee costs are both higher and different in nature from those of most other disabled persons.

The estimates assume that per capita charges for SMI ESRD services under Medicare will increase at an average of 2.8 percent per year during the projected period (July 1, 1987 through June 30, 1992). The estimates also assume a continued increase in enrollment. The historical and projected enrollment and costs for basic SMI benefits are shown in Table A8.

3. ESTIMATES FOR CATASTROPHIC COVERAGE

Beginning January 1990, SMI enrollees are covered by certain new services, as defined in the "Medicare Catastrophic Coverage Act of 1988" (Public Law 100-360). These catastrophic benefits are analyzed and projected separately from the basic SMI benefits.

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Table A8.--INCURRED REIMBURSEMENT AMOUNTS FOR END STAGE RENAL DISEASE

Year ending June 30,	Average Enrollment (thousands)		Reimbursement (millions)	
	Disabled ESRD	ESRD Only	Disabled ESRD	ESRD Only
1974	4	8	$40	$96
1975	7	11	68	144
1976	11	13	101	190
1977	14	15	137	229
1978	16	16	173	273
1979	18	20	216	322
1980	19	25	240	408
1981	22	28	300	470
1982	24	30	394	475
1983	25	34	450	491
1984	28	37	456	398
1985	30	39	445	388
1986	32	43	446	404
1987	34	47	477	442
1988	35	51	529	507
1989	37	52	566	526
1990	37	53	572	554
1992	39	57	641	645

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Table A9 shows projected reimbursement, on a cash basis, for the various SMI catastrophic benefits. The estimates for the catastrophic limit were developed based on the charge distribution for basic benefits incurred by SMI enrollees. Estimates for mammography screening were based on the age/sex distribution of SMI enrollees, the frequencies of the screenings allowed by law, and the reimbursement limitations allowed by law. The estimates for respite care were developed based on research studies of individuals who have limitations in 2 or more activities of daily living, estimates of the percentage of those individuals living with a primary caregiver, estimates of the percentage of individuals meeting either the outpatient prescription drug deductible or the catastrophic out-of-pocket limit, and estimates of the reimbursement per visit. At this time, the provision covering home intravenous drug therapy services is not estimable.

4. SUMMARY OF AGGREGATE REIMBURSEMENT AMOUNTS ON A CASH BASIS

Table A10 shows aggregate historical and projected reimbursement amounts on a cash basis, by type of beneficiary. The difference between reimbursement amounts on a cash basis and incurred reimbursement amounts results from the lag between the time of service and the time of payment.

5. ADMINISTRATIVE EXPENSES

The ratio of administrative expenses to benefit payments has been under 5 percent in recent years and is projected to decline in future years. Projections of administrative costs are based on estimates of changes in average annual wages.

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Table A9.-- AGGREGATE REIMBURSEMENT AMOUNTS FOR CATASTROPHIC BENEFITS ON A CASH BASIS
(In millions)

Fiscal year	Catastrophic limit	Mammography	Respite care	Total
Projected:				
Alternative A:				
1989	$ 0	$ 0	$ 0	$ 0
1990	1,030	160	20	1,210
1991	2,650	280	140	3,070
Alternative B:				
1989	0	0	0	0
1990	1,030	160	20	1,210
1991	2,660	290	140	3,090

Table A10.--AGGREGATE REIMBURSEMENT AMOUNTS ON A CASH BASIS
(In millions)

Fiscal Year 1/	Aged	Disabled (excluding ESRD)	Disabled ESRD and ESRD only	Total
Historical:				
1967	$ 664			$ 664
1968	1,390			1,390
1969	1,645			1,645
1970	1,979			1,979
1971	2,035			2,035
1972	2,255			2,255
1973	2,391			2,391
1974	2,537	$198	$139	2,874
1975	3,289	265	211	3,765
1976	4,037	347	288	4,672
T.Q.	1,078	111	80	1,269
1977	5,005	502	360	5,867
1978	5,785	625	442	6,852
1979	6,929	792	538	8,259
1980	8,485	994	665	10,144
1981	10,362	1,194	789	12,345
1982	12,404	1,468	934	14,806
1983	14,783	1,725	979	17,487
1984	16,803	1,794	876	19,473
1985	19,080	1,886	842	21,808
1986	22,070	2,179	920	25,169
1987	26,353	2,587	997	29,937
1988	29,797	2,823	1,062	33,682
Projected:				
Alternative A:				
1989	33,285	3,028	1,083	37,396
1990 2/	39,747	3,596	1,242	44,585
1991	47,575	4,284	1,368	53,227
Alternative B:				
1989	33,290	3,029	1,083	37,402
1990 2/	39,787	3,601	1,243	44,631
1991	47,742	4,301	1,369	53,412

1/ For 1967 through 1976, fiscal years cover the interval from July 1 through June 30; the three month interval from July 1, 1976, through September 30, 1976, is labeled "T.Q.," the transition quarter; fiscal years 1977-1991 cover the interval from October 1 through September 30.

2/ Beginning January 1, 1990, the reimbursement amounts include the SMI reimbursement for benefits added by the "Medicare Catastrophic Coverage Act of 1988" (Public Law 100-360).

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APPENDIX B

Statement of Actuarial Assumptions and Bases Employed in Determining the Monthly Actuarial Rates and the Standard Monthly Premium Rate for the Supplementary Medical Insurance Program Beginning January 1989*

1. Actuarial Status of the Supplementary Medical Insurance Trust Fund

Under the law, the starting point for determining the monthly premium is the amount that would be necessary to finance the SMI program on an incurred basis, i.e., the amount of income that would be sufficient to pay for services furnished during that year (including associated administrative costs) even though payment for some of these services will not be made until after the close of the year. The portion of income required to cover benefits not paid until after the close of the calendar year is added to the trust fund and used when needed.

Because the rates are established prospectively, they are subject to projection error. Additionally, legislation enacted after the financing has been established, but effective for the period for which the financing has been set, may affect program costs. As a result, the income to the program may not equal incurred costs. Therefore, trust fund assets should be maintained at a level that is adequate to cover a moderate degree of variation between actual and projected costs in addition to the amount of incurred but unpaid expense. Table 1 summarizes the estimated actuarial status of the trust fund as of the end of the financing period for 1987 through 1988.

* This statement appeared in the Federal Register of September 30, 1988. Projections shown in this statement differ from the projections shown in the rest of the report because of changes in assumptions since the rates were announced.

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TABLE 1—ESTIMATED ACTUARIAL STATUS OF THE SMI TRUST FUND AS OF THE END OF THE FINANCING PERIODS, JANUARY 1, 1987—DECEMBER 31, 1988
(In Millions of Dollars)

Financing Period Ending	Assets	Liabilities	Assets Less Liabilities
December 31, 1987	*$ 8,394	$5,126	$3,268
December 31, 1988	7,484	6,131	1,353

2. Monthly Actuarial Rate for Enrollees Age 65 and Older

The monthly actuarial rate is one-half of the monthly projected cost of benefits and administrative expenses for each enrollee age 65 and older, adjusted to allow for interest earnings on assets in the trust fund and a contingency margin. The contingency margin is an amount appropriate to provide for a moderate degree of variation between actual and projected costs and to amortize unfunded liabilities.

The monthly actuarial rate for enrollees age 65 and older for calendar year 1989 was determined by projecting per-enrollee cost for the 12-month periods ending June 30, 1989 and June 30, 1990 by type of service. Although the actuarial rates are now applicable for calendar years, projections of per-enrollee costs were determined on a July to June period, consistent with the July 1 annual fee screen update used for benefits before the passage of

* Section 706 of Title VII of the Social Security Act modified the provisions for the delivery of Social Security benefit checks when the regularly designated delivery day falls on a Saturday, Sunday, or legal public holiday. Delivery of benefit checks normally due January 1988 occurred on December 31, 1987. Consequently, the SMI premiums withheld from the checks ($692 million) and the general revenue matching contributions ($2,178 million) were added to the SMI trust fund on December 31, 1987.

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section 2306(b) of Pub. L. 98-369. The values for the 12-month period ending June 30, 1986 were established from program data. Subsequent periods were projected using a combination of program data and data from external sources. The projection factors used are shown in Table 2. Those per-enrollee values are then adjusted to apply to a calendar year period. The projected values for financing periods from January 1, 1986, through December 31, 1988, are shown in Table 3.

The projected monthly rate required to pay for one-half of the total of benefits and administrative costs for enrollees age 65 and over for calendar year 1989 is $54.05. The monthly actuarial rate of $55.80 provides an adjustment of -$0.68 for interest earnings and $2.43 for a contingency margin. Based on current estimates, it appears that with respect to enrollees age 65 and over the assets are not sufficient to cover the amount of incurred but unpaid expenses and to provide for a moderate degree of variation between actual and projected costs. Thus, a positive contingency margin is needed to build assets toward a more appropriate level.

An appropriate level for assets depends on numerous factors. The most important of these factors are: (1) the difference from prior years in the actual performance of the program and estimates made at the time financing was established and (2) the expected relationship between incurred and cash expenditures. Ongoing analysis is made of the former as the trends in the differences vary over time.

TABLE 2--PROJECTION FACTORS [1/]
12-MONTH PERIODS ENDING JUNE 30 OF 1986-1990
(In percent)

12-month period ending June 30	Physicians' services		Outpatient hospital services	Home health agency services [4/]	Group practice prepayment plans	Independent lab services
	Fees [2/]	Residual [3/]				
Aged:						
1986	0.0	9.9	19.9	13.3	60.7	40.5
1987	4.8	8.8	22.9	-3.6	33.6	23.8
1988	3.6	6.3	19.2	10.6	50.4	19.7
1989	2.8	5.9	15.7	11.7	25.0	13.6
1990	3.4	5.5	18.6	10.1	19.8	20.2
Disabled:						
1986	0.0	6.2	16.0	0.0	36.0	40.4
1987	4.8	7.4	11.5	0.0	37.1	22.5
1988	3.6	6.1	9.8	0.0	45.1	16.2
1989	2.8	5.8	4.9	0.0	19.7	13.8
1990	3.4	5.6	9.6	0.0	15.6	20.1

1/ All values are per enrollee.
2/ As recognized for payment under the program.
3/ Increase in the number of services received per enrollee and greater relative use of more expensive services.
4/ Since July 1, 1981, home health agency services have been almost exclusively provided by the Medicare hospital insurance (HI) program. However, for those SMI enrollees not entitled to HI, the coverage of these services is provided by the SMI program. Since all SMI disabled enrollees are entitled to HI, their coverage of these services is provided by the HI program.

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TABLE 3 — DERIVATION OF MONTHLY ACTUARIAL RATE FOR ENROLLEES AGE 65 AND OVER
FINANCING PERIODS ENDING DECEMBER 31, 1986 THROUGH DECEMBER 31, 1989

	Financing Periods			
	CY 1986	CY 1987	CY 1988	CY 1989
Covered services (at level recognized):				
Physicians' reasonable charges	$34.70	$38.85	$42.54	$46.36
Outpatient hospital and other institutions	8.46	10.22	11.99	14.06
Home health agencies	0.05	0.05	0.06	0.06
Group practice prepayment plans	2.05	2.93	3.96	4.84
Independent lab	0.99	1.20	1.40	1.64
Total services	$46.25	$53.25	$59.95	$66.96
Cost-Sharing:				
Deductible	-2.66	-2.69	-2.71	-2.72
Coinsurance	-7.87	-9.11	-10.34	-11.60
Total benefits	$35.72	$41.45	$46.90	$52.64
Administrative expenses	1.33	1.32	1.36	1.41
Incurred expenditures	$37.05	$42.77	$48.26	$54.05
Value of interest	-0.92	-0.42	-0.23	-0.68
Contingency margin for projection error and to amortize the surplus or deficit	-5.13	-6.55	1.57	2.43
Monthly actuarial rate	$31.00	$35.80	$49.60	$55.80

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3. Monthly Actuarial Rate for Disabled Enrollees

Disabled enrollees are those persons enrolled in SMI because of entitlement (before age 65) to disabiltiy benefits for more than 24 months or because of entitlement to Medicare under the end-stage renal disease program. Projected monthly costs for disabled enrollees (other than those suffering from end-stage renal disease) are prepared in a fashion exactly parallel to projection for the aged, using appropriate actuarial assumptions (see Table 2). Costs for the end-stage renal disease program are projected differently because of the complex demographic problems involved. The combined results for all disabled enrollees are shown in Table 4.

The projected monthly rate required to pay for one-half of the total of benefits and administrative costs for disabled enrollees for calendar year 1989 is $63.13. The monthly actuarial rate of $34.30 provides an adjustment of -$7.26 for interest earnings and -$21.57 for a contingency margin. Based on current estimates, it appears that the disabled assets are more than sufficient to cover the amount of disabled incurred but unpaid expenses and to provide for a moderate degree of variation between actual and projected costs. Thus, a negative contingency margin is needed to reduce disabled assets to more appropriate levels.

4. Sensitivity Testing

Several factors contribute to uncertainty about future trends in medical care costs. In view of this, it seems appropriate to test the adequacy of the rates announced here using alternative assumptions. The most unpredictable factors that contribute significantly to future costs are outpatient hospital costs,

TABLE 4 — DERIVATION OF MONTHLY ACTUARIAL RATE FOR DISABLED ENROLLEES
FINANCING PERIODS ENDING DECEMBER 31, 1986 THROUGH DECEMBER 31, 1989

	Financing Periods			
	CY 1986	CY 1987	CY 1988	CY 1989
Covered services (at level recognized):				
Physicians' reasonable charges	$37.73	$42.24	$46.24	$50.28
Outpatient hospital and other institutions	21.07	22.46	23.46	24.33
Home health agencies	0.00	0.00	0.00	0.00
Group practice prepayment plans	0.79	1.12	1.46	1.71
Independent lab	1.06	1.26	1.45	1.66
Total services	$60.65	$67.08	$72.61	$77.98
Cost-Sharing:				
Deductible	-2.49	-2.51	-2.52	-2.53
Coinsurance	-10.86	-12.01	-13.02	-13.98
Total benefits	$47.30	$52.56	$57.07	$61.47
Administrative expenses	1.77	1.68	1.66	1.66
Incurred expenditures	$49.07	$54.24	$58.73	$63.13
Value of interest	-8.06	-8.83	-9.82	-7.26
Contingency margin for projection error and to amortize the surplus or deficit	-0.21	7.59	-0.31	-21.57
Monthly actuarial rate	$40.80	$53.00	$48.60	$34.30

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physician residual (as defined in Table 2), and increases in physician fees as constrained by the program's reasonable charge screens and economic index. Two alternative sets of assumptions and the results of those assumptions are shown in Table 5. One set represents increases that are lower and is, therefore, more optimistic than the current estimate. The other set represents increases that are higher and is, therefore, more pessimistic than the current version. The values for the alternative assumptions were determined from a study on the average historical variation between actual and projected increases in the respective increase factors. All assumptions not shown in Table 5 are the same as in Table 2.

Table 5 indicates that, under the assumptions used in preparing this report, the monthly actuarial rates will result in an excess of assets over liabilities of $1,507 million by the end of December 1989. This amounts to 3.1 percent of the estimated total incurred expenditures for the following year. Assumptions which are somewhat more pessimistic (and, therefore, test the adequacy of the assets to accommodate projection errors) produce a deficit of $5,565 million by the end of December 1989, which amounts to 10.2 percent of the estimated total incurred expenditures for the following year. Under these more pessimistic assumptions, assets will be insufficient to cover outstanding liabilities. However, the cash balances in the Trust Fund should remain positive, allowing claims to be paid. Under fairly optimistic assumptions, the monthly actuarial rates will result in a surplus of $8,116 million by the end of December 1989, which amounts to 18.5 percent of the estimated total incurred expenditures for the following year.

Table 5.—ACTUARIAL STATUS OF THE SMI TRUST FUND UNDER THREE SETS OF ASSUMPTIONS FOR FINANCING PERIODS THROUGH DECEMBER 31, 1989

	This projection			Low cost projection			High cost projection		
	12-month period ending June 30,			12-month period ending June 30,			12-month period ending June 30,		
	1988	1989	1990	1988	1989	1990	1988	1989	1990
Projection factors (in percent):									
Physician fees 1/									
Aged	3.6	2.8	3.4	3.3	2.0	2.2	3.8	3.5	4.5
Disabled	3.6	2.8	3.4	3.3	2.0	2.2	3.8	3.5	4.5
Utilization of physician services 2/									
Aged	6.3	5.9	5.5	4.5	4.2	2.3	8.2	7.5	8.6
Disabled	6.1	5.8	5.6	2.0	1.2	0.7	10.3	10.3	10.6
Outpatient hospital services per enrollee									
Aged	19.2	15.7	18.6	13.8	7.3	11.2	24.6	24.1	26.0
Disabled	9.8	4.9	9.6	5.3	-7.6	-4.6	14.4	17.4	23.7
	As of December 31,			As of December 31,			As of December 31,		
	1987	1988	1989	1987	1988	1989	1987	1988	1989
Actuarial status (in millions):									
Assets	3/ $8,394	$7,484	$8,515	3/ $8,394	$9,166	$13,758	3/ $8,394	$5,724	$2,879
Liabilities	5,126	6,131	7,008	4,254	5,061	5,642	6,008	7,225	8,444
Assets less liabilities	3/ $3,268	$1,353	$1,507	3/ $4,140	$4,105	$8,116	3/ $2,386	-$1,501	-$5,565
Ratio of assets less liabilities to expenditures (in percent) 4/	3/ 8.7	3.2	3.1	3/ 11.7	10.5	18.5	3/ 6.1	-3.2	-10.2

1/ As recognized for payment under the program.
2/ Increase in the number of services received per enrollee and greater relative use of more expensive services.
3/ Section 708 of Title VII of the Social Security Act modified the provisions for the delivery of Social Security benefit checks when the regularly designated delivery day falls on a Saturday, Sunday, or legal public holiday. Delivery of benefit checks normally due January 1988 occurred on December 31, 1987. Consequently, the SMI premiums withheld from the checks ($692 million) and the general revenue matching contributions ($2,178 million) were added to the SMI trust fund on December 31, 1987.
4/ Ratio of assets less liabilities at the end of the year to total incurred expenditures during the following year, expressed as a percent.

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5. Standard Premium Rate

For calendar years 1984 through 1989, section 1939(e) of the Act provides that the standard monthly premium rate for both aged and disabled enrollees shall be 50 percent of the monthly actuarial rate for enrollees age 65 and older. Therefore, the standard monthly premium rate for both aged and disabled enrollees for calendar year 1989 is $27.90, which is 50 percent of the monthly actuarial rate for enrollees aged 65 and over for this period ($55.80).

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APPENDIX C

Catastrophic Coverage Premium*

On July 1, 1988, Congress enacted Pub. L. 100-360, the Medicare Catastrophic Coverage Act of 1988. It provides protection to Medicare beneficiaries whose Medicare expenses exceeded certain limits. To pay for this additional coverage for Part B, the law provides for new premiums beneficiaries will pay in addition to the current SMI premium. This notice addresses only the catastrophic coverage monthly premium for 1989. (Under Pub. L. 100-360, benefit changes occur on a phased-in basis over several years, beginning in 1990. Other new premiums and changes to the Part B premiums for subsequent years will be discussed in subsequent notices.)

As required by section 1839(g)(1)(A) of the Act, the catastrophic coverage premium for calendar year 1989 is $4.00. There are two exceptions to this amount, as required by section 1839(g)(4) and (5), respectively:

1. The monthly catastrophic coverage premium for calendar year 1989 is $1.30 for residents of Puerto Rico and $2.10 for residents of other U.S. territories and commonwealths; and

2. There is no catastrophic coverage premium for 1989 for individuals enrolled in Part B only (their new premium begins in 1990).

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* This statement appeared in the Federal Register of September 30, 1988.

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APPENDIX D

STATEMENT OF ACTUARIAL OPINION

It is my opinion that (1) the methodology used herein is based upon sound principles of actuarial practice and (2) all the assumptions used and the resulting cost estimates are in the aggregate reasonable for the purpose of evaluating the actuarial and financial status of the Federal Supplementary Medical Insurance Trust Fund, taking into account the experience and expectations of the program.

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Chief Actuary,
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